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ABSTRACT

Designed to assist school districts in making meaningful improvements in programs for their adolescent populations, this publication presents descriptions of 64 innovative and successful educational projects developed throughout the United States. The descriptions are classified in five categories: basic skills, including reading, language arts, and mathematics; career education and guidance; environmental education; special education; and special interest programs such as social studies, humanities, alternative schools, affective education, and teacher improvement. The programs are described in a uniform format that includes an overview; discussions of the rationale and development of the program, its essential elements, and its goals and results; replication criteria for materials used; and information about training requirements, costs of implementation, and the contact person involved. An alphabetical index of program titles is appended. (FL)

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ADOLESCENT PROGRAMS THAT WORK

A national survey of successful educational programs for adolescent students.

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Department of Education, State of New Jersey
Trenton, New Jersey
November 1978

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September, 1978

This volume represents one part of a threefold thrust resulting from the recommendations made by the New Jersey Study Commission on Adolescent Education in their report of January, 1978. The assigned task of the Commission was to examine "the state of the art and the problems of adolescent education in New Jersey" and to "formulate new policies and recommendations for research and development".

The Commission's study was prompted by recognition of the need for change in adolescent education, mandated by the social changes of the 1970's which have made the lives of adolescents very different from those in earlier decades. Their 58 recommendations covered not only educational concerns in the high schools, but also sociological concerns in the family, community and social structures, all of which impact upon adolescent life.

Three separate endeavors resulted:

- A national survey of successful new educational programs which may be adopted for use in other school districts, entitled, Adolescent Programs That Work.

- Four regional adolescent resource guides list social agencies and services within the four regions of the Educational Improvement Centers, for use by school counselors and other specialists in pupil personnel services.

- Statewide guidelines which enable local district counselors to develop "thorough and efficient" guidance and counseling programs and facilities; 16 model programs have been identified, and workshops are being conducted for awareness and implementation.

The forces of social change and the complexity of emerging problems have provided much stronger mandates for educational change than have previously prevailed. We hope that the publication of these educational programs, resource guides and counseling guidelines will assist school districts in providing improved educational, counseling and social services for their adolescent populations.

Fred G. Burke
Commissioner of Education
State of New Jersey

This report was prepared from information provided by EDUCATIONAL PROGRAMS THAT WORK, 1977 (New Jersey), project-developed materials, documents prepared by Capla Associates, 1976, and the national edition of EDUCATIONAL PROGRAMS THAT WORK (Vol. IV, 1977).

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INTRODUCTION

ADOLESCENT PROGRAMS THAT WORK comprises 64 innovative and successful educational programs developed throughout the nation, addressed to adolescent students, grades 6 to 12. Researched and written in response to the recommendations of the New Jersey Study Commission on Adolescent Education (January, 1978), it is designed to assist school districts in making meaningful improvements in programs for their adolescent populations. For these students, the social upheavals of the last decade have rendered the traditional programs incapable of meeting their needs and problems.

Broad in scope and diversity, programs are included which: improve basic skills in mathematics and language arts; offer career education and guidance; address concerns in environmental education; relate to the specific needs of special education students; promote special subjects and interests; enrich curriculum in humanities and social studies; and enhance classroom, school and district administration. All are designed to raise the levels of achievement and quality of life for students, parents, staff and community.

Initiated largely by local school districts to solve local educational problems, the programs generally have new approaches which include individualized units, flexible organizational arrangements, modern learning theories, new methods of inquiry, materials and media, and involvement with the world beyond the classroom. All may be adopted to suit a district's specific needs.

To facilitate reference, the 64 programs described herein are classified in five categories:

Section I describes programs in *Basic Skills,* including reading, language arts and mathematics
Section II offers *Career Education and Guidance* programs
Section III details programs in *Environmental Education*
Section IV addresses *Special Education* programs
Section V comprises a mixture of programs of *Special Interest,* such as social studies, humanities, alternative schools, affective education, and teacher improvement.

To ensure ready reference, an alphabetical index of project titles is appended.

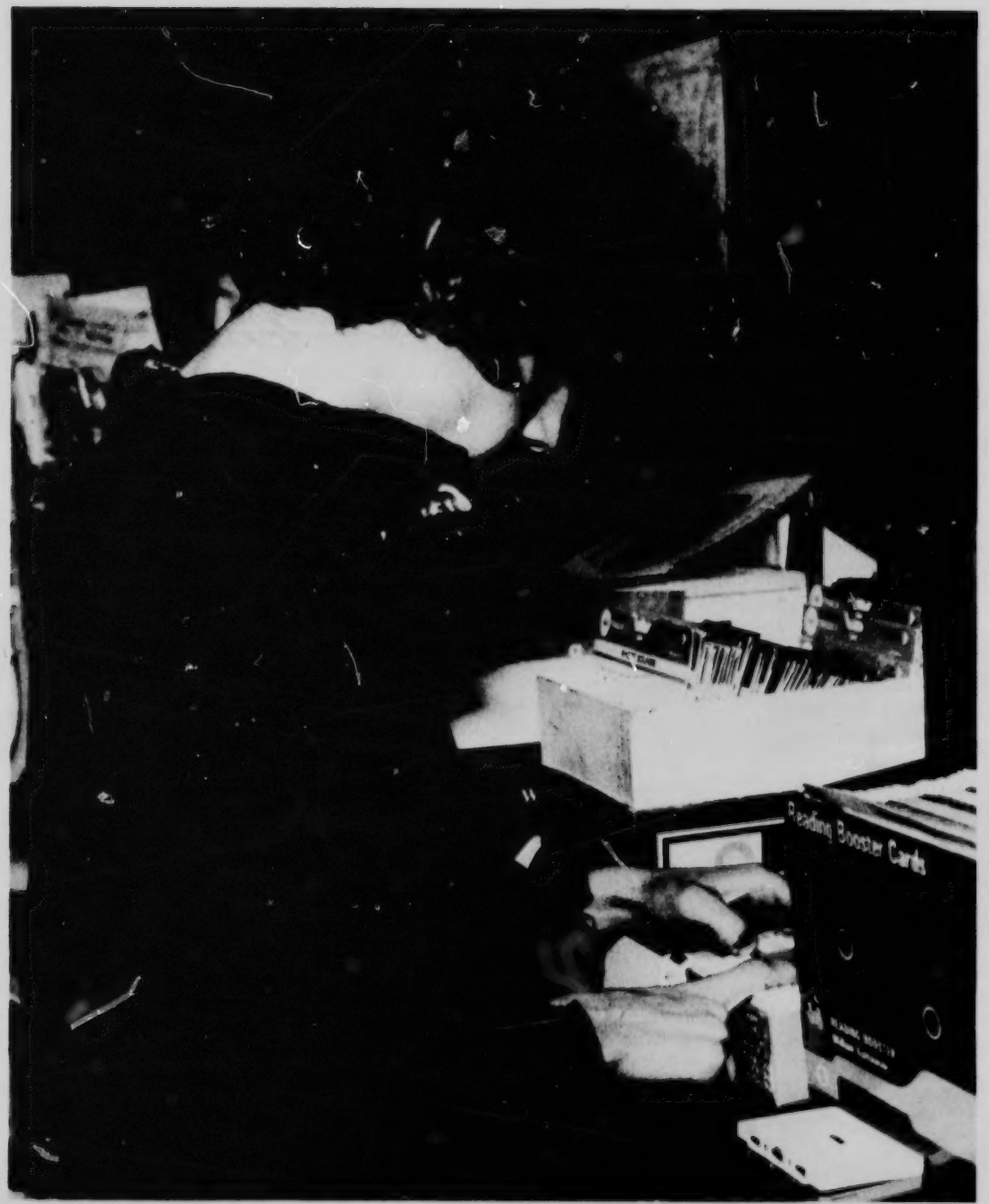
All programs are described in uniform format, including: overview, development and rationale; essential elements; goals and results; replication criteria involving materials available, training requirements and costs of implementation; and finally, the contact person.

The three-hole punch format was added to the volume to facilitate separation of its units for district-wide use, and to provide easy reproduction of its contents.

As local districts determine their educational needs, the successful programs described in this catalogue can well advance their efforts towards educational improvements for their adolescents.

Basic Skills

Reading
Math
Language Arts



Basic Skills
—Math
—Language Arts
Grades 6-8

ACADEMIC ADVANCEMENT PROGRAM MATHEMATICS AND LANGUAGE ARTS

Morristown, N.J.

OVERVIEW, DEVELOPMENT AND RATIONALE

The Academic Advancement Program (AAP) is a program of individualized self-paced instruction in language arts and mathematics for grades six through eight and for remediation in the high school. It follows the precepts of mastery learning and is based on a sequential hierarchy of basic skills to accommodate a wide range of skill levels. The learning materials, commercially produced, have been reassembled into skill sequences adapted to meet the needs of heterogeneously grouped students. Students can move from one set of materials to another on one skill level or upward as mastery is displayed. Within an AAP classroom it is possible to find twenty or more students all working at different levels.

Designed as an alternative to ability grouping, the Academic Advancement program attempts to solve the problem wherein a school district, using homogeneous classes, is outwardly desegregated but the classrooms are models of minority group isolation. The rationale behind the program is that ability grouping, especially in a community of cultural and racial diversity, discourages social integration, burdens children assigned to some groups with resentment and humiliation, and reinforces in them unfavorable self-concepts.

The program was developed to accommodate the wide range of skill levels among students in the Morris School District following the merger in 1972 of two separate districts to achieve racial integration. Its development involved teachers, teacher aides and administrative staff in planning the curriculum, assembling the basic units, training the teachers and aides, teaching and testing students, and evaluating the results. The mathematics component of AAP was validated as successful, cost-effective and exportable in 1974, the language arts component in 1975. The program received the Educational Pacesetter Award from the National Council on Supplementary Centers and Services, and the Excellence in Education Award from the National Association of State Advisory Council Chairmen.

MATHEMATICS

The mathematics component comprises sixty-six units each containing precise instructional objectives with test items for each objective. The program covers a mathematics skill sequence from operations with whole numbers through the elements of a first year course in algebra. Four compatible, commercially produced mathematics programs have been integrated and keyed within the teacher's manual to form the hierarchical series of instructional

units. Each unit includes pre- and posttests drawn from those provided by the commercial series, which enable the teacher to assess student needs and progress, and to guide the student through a variety of alternative learning experiences.

LANGUAGE ARTS

The Language Arts component consists of a reading system, a composition system and a grammer/spelling/vocabulary system designed for a heterogeneous classroom. In the reading system, self-paced skills are taught on nine levels (grades 4-12); or the entire class focuses on one piece of literature; or the class is divided into three or more groups of different reading levels with the small groups divided into smaller ones for peer-group instruction. The composition system comprises a series of sequential objectives for each grade level. The grammar/spelling/vocabulary system teaches the relevant skills through 127 grammar cards, with pre and post tests.

For both math and language arts, a monitoring system enables the teacher to record each student's progress. Students work in large groups, in small groups, and individually. Peer group instruction is encouraged, and students are taught to help one another in their learning experience. Students spend 40-60 minutes per day in the AAP class, depending upon their assessed level of need, and an additional 75 minutes per week outside of class on AAP work.

During the first year of implementation, teacher aides are needed to assist the teacher with the new record-keeping procedures, to correct papers, to guide students to learning materials, to assist in general classroom management, and occasionally to assist in individualized teaching.

ESSENTIAL ELEMENTS

The essential elements of the AAP are divided into two categories based upon their relationship either to the classroom teacher or to the administrator or project director of the program:

Classroom Teacher

1. Learning materials
2. Instructional system
3. Monitoring system
4. Storage system for materials
5. Classroom organizational systems
6. Use of paraprofessionals

Administrator

1. Staff selection
2. Supervision and staff support
3. Evaluation
4. Expansion and refinement of the program in the district

GOALS AND RESULTS

The AAP goal was to disprove the major assumption of proponents of skills grouping that separation enhances student progress. Evaluation was based on 200 students in grades 6-8.

Goal: To show that learning in mathematics and language arts is not adversely affected when classroom organization is changed from homogeneous group instruction units to individualized instruction in heterogeneous units.

Evaluation: The Iowa Test of Basic Skills (1971 edition) was administered to both the AAP group and a control group under standardized conditions. Test results supported the hypothesis that heterogeneously grouped students in an AAP setting are not penalized. In addition, statistically significant positive differences were found at the eighth grade level for math concepts and math composite scores.

Questionnaires returned by parents of program children indicated positive results in the affective domain, with 86% reporting that their children enjoyed school much more than in past years.

REPLICATION

Materials: The program's curriculum materials may be purchased at cost:

Replication Manual for the Classroom Teacher (300 Pages)	$6.00
Administrator's Guide	Free of Charge
Filmstrip/Tape Presentation	$5.00
Program Project Report – a descriptive brochure	Free of Charge

Also included are a progress record card for each student and student-parent questionnaire. The language component provides in addition home packets and skill packets to be used in class and at home.

Training: Orientation presentations, visitation opportunities, and a four day training program can be provided for interested educators. For successful replication at least one administrator should be trained along with the teachers; aides need no special training. Training in the program is now done primarily by the four Educational Improvement Centers of New Jersey.

COSTS

Of implementation: Start up costs are approximately $10 - $14 per student. Storage facilities, very necessary to the program, should cost no more than $200 per classroom. Aides are necessary for the teacher to get the program started. One aide serves 2 teachers and approximately 200 students in a departmental situation; in a self-contained classroom, aide service can be part-time for the periods assigned to math and language arts. The need for the aide gradually diminishes, since many of her tasks can later be accomplished by the teacher or the students themselves.

Of maintenance: Approximately $5-8 per student.

CONTACT PERSON

Joseph H. Dempsey, Director
Academic Advancement Program
Morris School District

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Morristown, New Jersey 07960
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PROJECT CATCH UP – KEEP UP

Tucson, Arizona

OVERVIEW, DEVELOPMENT AND RATIONALE

Project Catch Up–Keep Up is an individualized diagnostic/prescriptive remedial reading and in-service teacher training program for students, grades K-12, who are reading two or more years below grade level. Designed to raise their reading level, one month growth for each month in the program, the program reinforces the development and application of reading skills, promotes self-confidence, encourages "pleasure reading", and emphasizes parental involvement. Developed in 1972 as an extension of special reading instruction available since 1965 in the Flowing Wells School District in Tucson, the project was approved for national dissemination in 1974.

Comprising two instructional components – the Reading Lab and Inservice Teaching, the project is based on the *Flowing Wells Reading Support System* which contains hierarchic sets of specific behavioral objects for comprehension and phonic skills. Other skill areas include word attack, vocabulary, oral reading, writing, spelling, punctuation and dictionary use. The system diagnoses a student's reading deficits, prescribes activities, and evaluates the student's progress.

Following a 2-3 week diagnostic assessment phase, students with the greatest reading deficits are selected to receive instruction in the Reading Lab component, while students with less severe reading deficits are designated for the Inservice Teaching component. In some cases, students may need instruction in both components.

In the Reading Labs, students receive individualized instruction from reading teachers for 45-60 minutes a day, four days each week. The Reading Lab contains an extensive variety of book reading games, displays, and learning materials. Reading teachers select materials and equipment for students based upon the results of the diagnostic assessment process. Teaching and learning techniques vary according to the level of instruction needed and the interests of the students. Students are encouraged to use the resources in the school and public libraries in addition to the materials available in the Reading Lab.

In the Inservice Teaching component, students are instructed in their regular classrooms by the Reading teacher who team-teaches with the classroom teachers one period per day, thereby integrating reading skills with academic subject areas. Thus the Inservice Teaching component enables the regular classroom teacher to learn individualized instruction techniques through observation and consultation with the reading teacher. At the same time, program students receive the benefits of direct service. Approximately 50% of reading

teacher time is spent in the Inservice Training component. Student progress is monitored, assistance is provided as needed, and growth is recorded. One reading teacher is available for every 30 students, with one aide provided for every 3 reading teachers.

Essential to the program is parent involvement effected through the Parents Advisory Council, through home visits made by the Reading Teacher, and through parent-teacher conferences scheduled at school.

The program involves the entire school system; it would be difficult for one teacher to adopt only a portion of it. The program was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in December, 1974.

ESSENTIAL ELEMENTS

1. An instructional system containing:
   a. The Reading Lab – a resource center staffed by Reading teachers
   b. Inservice Teaching – in the classroom combining the reading teacher and classroom teacher
2. Parental involvement, through Parent-Teacher Council, home visits, and parent-teacher school conferences
3. Use of the Flowing Wells Reading Support System, for diagnosis, prescription and evaluation
4. Monitoring and daily record-keeping

GOALS AND RESULTS

The goal was to raise the reading level of children who read below their grade level.

Gates-McGinitie reading scores were collected during 1974-75 from students in grades 5-8 enrolled in Title I funded schools. Data analysis indicated that students who remained in the program for at least three months made significant gains in their reading level. From the beginning of the program, students have met or exceeded the program goal – that at least 75% of the students gain one month in reading level for each month. Although the educational significance of the results varied across grades, subtests, and instructional components, the program has had a positive impact on participating students' ability to read.

REPLICATION

Materials: Project materials include:

– **Reading Support System,** the projects implementation manual	$22.00
– **Slide-tape presentation**	22.00

A descriptive brochure and booklet entitled *Analysis and Selection Kit* are available free of charge.

A variety of diagnostic, instructional, and staff-developed materials and supplies is used. Diagnostic instruments and tests needed for project implementation include: *Gates-Mac Ginitie Reading Test; Sucher-Allred Placement Inventory; Botel Reading Inventory: Word Recognition Test and Phonic Mastery Test;* and *Verbal Opposites Test.*

The *Flowing Wells Reading Support System* is used as the basis for the reading curriculum in grades K-6, as well as specified commercial materials for adolescents.

The adopting school system may need to purchase commercial reading materials, diagnostic assessment instruments, and evaluation materials not currently available in the school system. In most cases, however, the adopting school district can adapt for program use materials already available in the district.

A Project Information Package (PIP) was developed by the U.S. Office of Education for the program ($25.00). The following chart describes the available PIP materials and their uses:

Item	Uses	When	Contents/Description	Purpose
Project Management Directory	Project director	All year	PD orientation, management guidelines, school and community relations, budgeting, staff and student selection, continuing beyond the first year	To acquaint project director with the project and to provide guidelines for project management
Project Orientation Materials	Project director, Reading Coordinator	Heavily during start-up as needed throughout the year	Slide/cassette tape One-page handout Four-page brochure Poster Presenting Project Catch-Up-Keep-Up	To provide support materials for use in explaining the project to others
Project Management Calendar	Project director	All year	Task list	To provide project director with chronological, managerial and planning aid
Reading Coordinator/Staff Development Manual	Reading Coordinator, Project director	All year	Reading coordinator orientation, staff development requirements, workshop materials, agenda for training	To provide the project director and reading coordinator with information and agendas for staff development
Teacher's Manual	Teachers	All year	Description of roles and duties	To provide guidelines for successful classroom implementation
Evaluator's Manual; *A Practical Guide to Measuring Project Impact on Student Achievement*	Project director, Evaluator	Planning and conducting evaluation	Description of several alternate models for project evaluation; guide to selecting one or more models	To provide guidelines for obtaining valid evaluation data with a sound evaluation design

Training: Staff training, essential to the program is provided by the project staff. The PIP material provides training and implementation guidelines, workshop agendas and schedules, with specific information on staff skills needed for proper implementation.

COSTS

Of implementation: Installation costs vary according to the availability in the adopting district of: 1) teaching staffs; 2) materials, equipment and facilities; 3) funding services and current school budget; and 4) technical assistance needed for implementation. The program requires at least one large classroom for the Reading Labs. Each classroom can house up to three Reading Labs, each in its own section of the room, with the fourth section of the room reserved for "pleasure reading."

Of maintenance: Costs for 225 students for the 1975-76 school year at the project site were estimated at $370 per student, including staff salaries, consumable materials, transportation, and equipment replacement and maintenance.

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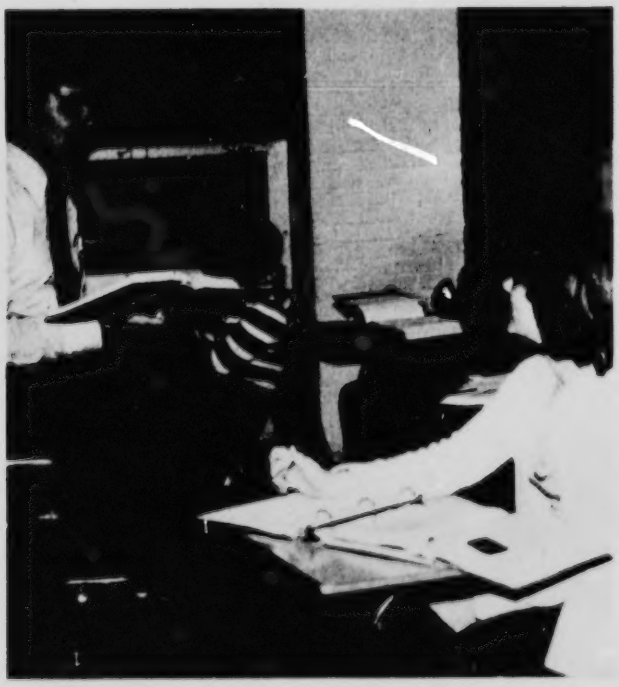

CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM (COMP)

Columbia, Missouri

OVERVIEW, DEVELOPMENT AND RATIONALE

The Conceptually Oriented Mathematics Program is a diagnostic prescriptive management system which provides a list of sequential skills in each of the basic skills area, thereby ensuring continuous progress from beginning mathematics until algebra. Designed to meet individual needs through small group instruction, it is based on the dual hypothesis that

1. teachers will break away from a lock step textbook sequence if given tools for diagnosis and prescription, and

2. commercially produced textbooks can be utilized effectively in individualized instructional programs

Funded in its development and evaluation by ESEA Title III and the Columbia Board of Education, it established pilot schools in an urban setting with a diverse student population.

Students are placement-tested to determine their individual strengths and weaknesses and are grouped accordingly for more effective teacher instruction. Students move through 25 instructional levels, each broken into 2 or more steps, developing skills in ten broad concept areas which include Numerals, Order, Addition, Subtraction, Multiplication, Division, Function and Graphs, Geometry, and Measurement. Anywhere from two to seven concepts may be incorporated into a single step. These concept areas are visually organized on a Scope and Sequence Chart. Students must reach a mastery of 80% on each of the steps on a given level before proceeding to the next level of learning. They may skip a complete level, if they can score 80% on the placement test for that level. Thus, each student can proceed at his own pace. A complete lesson, prepared for each concept, is presented for each step at every level. Lessons are keyed in to commercial textbooks published by Houghton Mifflin, Addison-Wesley, D.C. Heath, and Scott-Foresman. In addition, film strips, commercial tapes and enrichment books are employed.

The program is used 40 minutes a day by lower grade students, and 60 minutes a day by upper graders. Teacher aides, though not required, facilitate recordkeeping and classroom management.

COMP was validated, and approved by the Joint Dissemination Review Panel in 1974, and received the Educational Pacesetter Award. In Columbia, Missouri, approximately 7000 students are in the program, involving 13 elementary schools, 3 junior high schools and one nonpublic school. COMP has trained districts in 15 states.

ESSENTIAL ELEMENTS

The program's replication in another district is defined by the use of these elements:

1. diagnosis, placement and post-tests
2. use of the Scope and Sequence Chart with its ten concept areas
3. use of the 25 instructional levels
4. use of the Teacher Guide Book and individual mathematics profile sheets for teaching progress.
5. instruction in small skill-level groups which can constantly change.

GOALS AND RESULTS

The overall objectives of COMP are 1) to allow teachers to work with students on an individual basis, and 2) to help students achieve mastery of the mathematics skills customarily introduced in grades 1-8 within sequences that reflect individual competency and achievement.

Student achievement data were collected from three elementary schools (grades 1-6) and a junior high school. Evaluation was undertaken at all levels, using the Metropolitan Achievement Test for grade 1, and the Iowa Test of Basic Skills for grades 2-8. The level of achievement showed marked improvement compared with previous scores.

During the 1973-1974 academic year, the impact of COMP in two New Jersey School districts was evaluated through E.S.E.A. Title III Project TAP. Pilot-control comparisons revealed no significant differences in math achievement during the initial year of implementation. However, teachers felt that the program had a very positive effect on their instructional approaches, and expressed satisfaction with COMP's emphasis on concepts, its range of materials, and the skill level groupings.

REPLICATION

Materials:

One Introductory set COMP **$95.00**
8 guidebooks, placement and post tests

Guidebooks for Teachers 8.00 each
Eight handbooks supplement the teacher's knowledge of mathematics and provide assistance in locating appropriate activities for concept development. A suggested lesson plan has been prepared for each concept. The guidebooks include a SCOPE AND SEQUENCE CHART which enables the user to visualize the organization of the COMP program. Each handbook concerns 3 of the 25 levels (the last has 4).

Complete set Worksheets 26.00
Duplicates of the 396 activity sheets included in Guidebooks for Teachers. Provide extra activities and problems for students

Summary Levels for Parents (1 set) 7.00
Each includes a 2-page review of a level, explaining new words and concepts

Projected Teaching Calendar 3.00
A means of recording estimated and actual amount of time needed for each concept

Handbook for Teachers and Administrators 10.00
A complete summary of the program including its philosophy and use of materials

PLACEMENT TESTS, developed for each of the twenty-five levels in the program, are given to each student to determine the instructional level at which he will enter the program; include copy of the INDIVIDUAL RECORD SHEETS, to indicate the student's achievements and needs.

POST TEST I is the test given after the instruction for a level has been completed. If a student cannot demonstrate mastery (80%) on each of the basic skills concepts in each level, he receives additional instruction in these areas.

POST TEST II includes a set of alternative tests for levels 7-25, used after reteaching those concepts in which a student did not show mastery on Post Test I.

Commercial textbooks published by D.C. Heath, Addison-Wesley, Haughton-Mifflin and Scott-Foresman are required, since they are cross-referenced to the program.

Training: One day of training is given at the adopter site prior to implementation, for all teachers and administrators involved in the program. A day of technical assistance is provided during the school year. A staff member must be designated as contact person and coordinator for the project. The Teachers Guide Book serves as a handbook for implementation.

COSTS

Of implementation: Estimated at $8.50 which includes cost of providing one commercial textbook for every 3 students.
Of maintenance: Minimal.

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EXEMPLARY CENTER FOR READING INSTRUCTION (ECRI)

Salt Lake City, Utah

OVERVIEW, DEVELOPMENT AND RATIONALE

ECRI is a teacher training program for teachers of grades K-12 concerned with instructional behaviors critical to the prevention of reading failure. It has identified these behaviors; effectively alters them to improve students reading performance; provides inservice education for teachers geared to their research findings; and disseminates this information. It is designed for children of all abilities, mono or multi-lingual, at all socio economic levels, in urban, suburban, or rural areas.

Based upon the philosophy that teachers must be trained to implement critical instructional behaviors which address specific reading problems, the program was an outgrowth of a Reading Clinic established in 1965. Between 1971 and 1974, funded by ESEA Title III funds, the ECRI staff tested their teaching techniques on 700 students in 4 schools in Utah with a history of low reading achievement and with varied ethnic backgrounds.

Identified teaching behaviors include the ability to:

- Elicit correct responses from non-responding students.
- Diagnose and prescribe instantly when errors or no responses occur.
- Vary the number of practices to each student's learning rate.
- Increase the rate of correct responses from students to provide time for them to master skills.
- Establish high mastery levels of response, with performance and rate as criteria.
- Correlate language arts activities to increase the number and types of responses (e.g., writing and spelling that which the student reads) and focus on the output languages (speaking and creative writing).
- Utilize effective management and monitoring systems.

The teaching techniques demonstrated by the programs apply to both elementary and secondary levels and to students of varying abilities and cultures; they are also adaptable to a variety of language arts materials and classroom organizational patterns. Students are motivated by the momentum of the teacher directives during instruction, by reinforcement offered during practice time, and by the structure of the scheduling, record keeping, and multisensory instruction. Criteria for passing a mastery test are identical for all students, regardless of their reading levels. The teacher selects only those behavior-management

techniques which build the student's self-concept, rather than destroy it. A student progresses in practicing new skills and working in materials independently of other students and at his own pace. In small groups, based upon instructional reading levels, students are instructed in those language skills which they will need in future work. Individual conferences are held daily. Areas covered include reading, oral language, spelling, dictation, creative writing and penmanship.

Because its teaching techniques have effectively raised the reading levels of students in schools employing their methodology, ECRI was nationally validated and approved for national dissemination by the Joint Dissemination Review Panel of the United States Office of Education, in May 1974. As a Developer-Demonstrator Project in the National Diffusion Network, its staff has provided inservice education to school districts throughout the United States and Canada.

ESSENTIAL ELEMENTS

Replication of the ECRI program is defined by the use of their methodology which includes:

- Use of identified instructional behaviors aimed at improving students' reading performance.
- Use of the multi-media teacher training package comprising 20 teacher training kits.
- Individualized instruction in small groups, aimed at sequential skill mastery.

GOALS AND RESULTS

ECRI's goal was to establish specific teaching behaviors aimed at improving students' reading performance. Its impact on reading achievement was assessed by a variety of standardized reading tests, including the Metropolitan Achievement Test, the Gates Mac Ginitie Reading Test, the Standford Achievement Test and the Durrell Analysis of Reading Difficulty. Results of the experimental group indicate gains significantly greater than the control group's. Adopting districts demonstrate effectiveness: first graders read at 3.8; second graders average ninety-fifth to ninety-ninth percentile; clinic pupils average four months' gain per month; Title I pupils average 1.4 to 3.2 years gains per year; secondary students average +2.5 years gains per year.

REPLICATION

Materials: ECRI has developed a multi-media teacher training package with 20 self-instructional training workbooks (priced at $6.95 to $25.00). Mastery tests have been written for many basal readers stressing accuracy and rate. All materials may be reproduced by local school districts during staff training. Supplies for teachers and pupils are those usually found in schools, and existing district reading materials may be used. A complete listing of staff-produced materials is available from the project.

Training: Instruction is provided by ECRI to enable teachers to use the critical teacher behaviors, develop the management system for mastery and individualization, and teach reading and language skills effectively. Two 2-1/2 hour training sessions are necessary to complete each of the 20 training kits. A 5-10 day preparatory inservice education program

with one ECRI staff person for 15-20 trainees is desirable. This includes lecture and practice sessions, preparation of materials for classroom use, and teaching pupils in a simulated setting. Following this, monitoring visits are made to trainees' classrooms. The length of time to replicate the ECRI model varies.

Week-long training seminars for teachers, supervisors, and administrators are conducted quarterly at project or adopter sites. ECRI inservice also includes university classes (where teachers pay tuition). Seminars for teachers of teachers are conducted biannually, with a three-week inservice program held each summer in Salt Lake City.

COSTS

Of implementation: Depending upon the length of training time and travel, training contracts range from $5 to $25 per student. The programmed kits may also be purchased for self-instructional staff training. Teacher kits cost $20 and director kits cost $25.

Of maintenance: Minimal, since local districts can reproduce mastery tests which initially cost 20 cents each.

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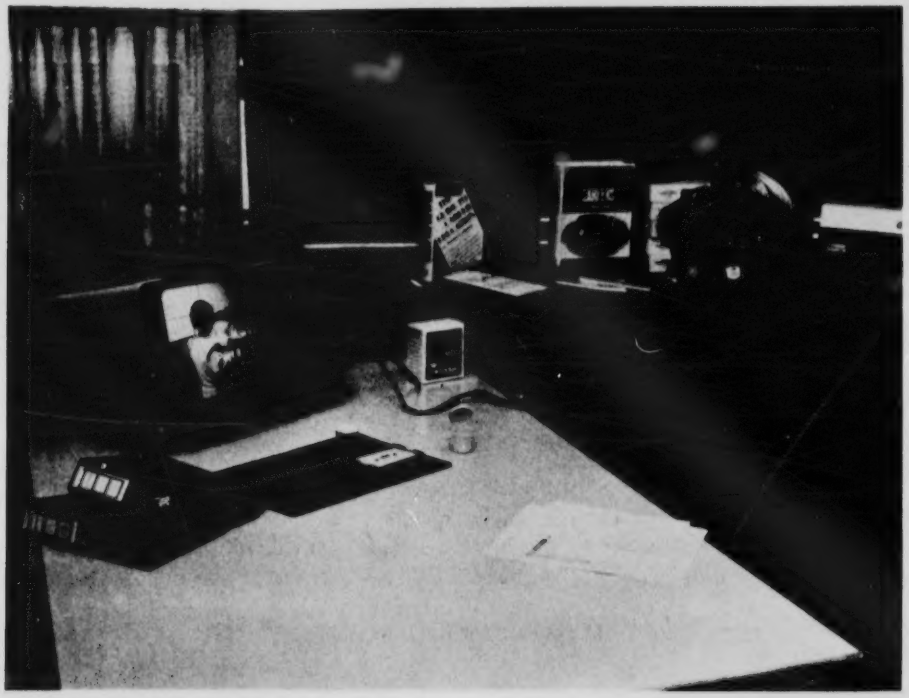

FLAGSTAFF REMEDIAL READING PROGRAM
(TITLE I)

Flaggstaff, Arizona

OVERVIEW, DEVELOPMENT AND RATIONALE

This diagnostic-prescriptive remedial reading program is designed to reduce diagnosed reading disabilities as quickly as possible and return the child to the regular classroom for reading instruction. Based on the belief that reading is a highly individualized process with no single best way to acquire reading competencies, teachers employ many instructional and organizational methods, personal teaching styles and favorite materials to meet individual student needs and foster student success. The underlying rationale is that students *and* teachers must

1. experience success.
2. self-pace their work.
3. make choices from a variety of options.

Following an extensive screening process, which not only tests reading skills (on the Stanford Achievement Test) but also uncovers any visual or auditory abnormalities, classroom and reading teachers formulate a remedial reading plan for each student and prescribe daily activities on a pull-out schedule. Daily instruction is scheduled in a special reading room for small groups of 6-10 students for 30-55 minutes, depending on grade level, with 45 minutes to one hour for junior high students in class sizes of 12-16. Remedial reading class is extra instruction beyond that included in the regular English courses.

A typical instruction period includes a brief time for students to read for pleasure in self-chosen books, personalized skill instruction according to skill weaknesses, and a small group activity such as a reading game or project. With teacher guidance, children become more proficient in these basic skill areas: decoding, vocabulary development, comprehension, study skills and, for older children, reading rate.

The present program developed from an original four-part Title I program, funded in 1966, which comprised, in addition to remedial reading, elementary counseling, school libraries and audio visual services. With the latter services now absorbed by the district, reading improvement constitutes the entire thrust of the program, with all Title I funds applied to salaries of remedial reading teachers. Target schools are selected on the basis of Title I economic deprivation criteria, and student eligibility is based on achievement, with priority given to the lowest achievers.

The program was nationally validated, approved by the Joint Dissemination Review Panel of the U.S. Office of Education in 1973, and selected for dissemination in a Project Information Package (PIP).

ESSENTIAL ELEMENTS

1. Identification of student needs through extensive tests and screening.
2. Daily pull-out schedules prescribed cooperatively by classroom and reading teachers for grades 2-6; by special remedial teaches for junior high students.
3. Use of a multiplicity of materials, teaching styles, and classroom organizational methods.
4. Use of remedial specialists or teachers committed to ongoing training in remedial instruction, one teacher per 50-60 students, in groups of 6-10 students.
5. Use of a special reading room.

GOALS AND RESULTS

The goal was that sixty-five percent of the participating students in the remedial reading program would gain one month grade placement in reading per one month of enrollment in the special reading classes.

Evaluations of student progress, since 1966, have used a prepost test design based upon performance on the vocabulary and reading comprehension subtests of the Gates-MacGinitie Reading Test.

Results indicate achievement of goals: In 1975-76 over 85% of participating students achieved one month or more grade-placement-gain per month of remediation. In 1976-77, all students, grades 2-9, showed mean gain of 4.33 NCEs on Gates-McGinite Reading Test. Corresponding mean percentiles: pretest, 16.0 percentile; posttest 21.5 percentile. The program has its greatest impact on both reading comprehension and vocabulary scores in grades 2-6, where mean gains of one year or more were achieved at each grade level within a term of remediation in the program ranging from 4 to 8 months. The program's Evaluation Report describes these results as fairly typical of the program's achievements over a ten-year period, indicating consistency in its successful impact upon student's performance.

REPLICATION

Materials: The complete list, currently available, covers the multiplicity of materials used in 16 individual reading programs in 8 public and 1 parochial school. Categories are: Books (basal test, paperbacks, workbooks and worksheets), kits and multi-level materials, newspapers and magazines, dictionaries and thesauruses, games, audio-visual materials and reading devices, perceptual materials, teacher constructed materials, professional books (for teacher use), miscellaneous. These materials are used in the following activities: listening, writing, comprehension, outside reading, vocabulary and spelling.

The Project Information Package, (PIP), developed by the U.S.O.E. includes Project Orientation Materials, Project Director's Management Calendar, Project Management Directory, Reading Supervisor/Staff Developer Manual, Teacher's Manual and Evaluator's Manual. Descriptive brochures are available free of charge.

Training: Project staff suggests some inservice time for teachers implementing the program to improve their skills in diagnostic and remedial techniques. For adopting districts training and follow-up sessions are available at project or adopter site.

COSTS

Of implementation: Costs vary, depending upon resources already available in a school for setting up a special remedial reading room. Special materials listed above must be purchased. Teacher salaries and benefits (95% of budget) represent new cost to district; administrative cost may be absorbed by existing personnel.

Of maintenance: Continuation cost is approximately $300 per pupil (700-800 students), including $10 per pupil for continuing costs in materials and tests.

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Basic Skills
—Reading
Career Education
Grades High School and Adults

FLIT: FUNCTIONAL LITERACY

Carmel, California

OVERVIEW, DEVELOPMENT AND RATIONALE

FLIT is a comprehensive, job-related functional literacy educational program for students and adults with low reading skills (at least a sixth grade reading ability). It is designed to increase their functional literacy levels to meet job reading requirements by providing them with drill and practice in the types of reading tasks encountered in advanced job training or in future job placement.

Developed originally by HumRRO (Human Resources Research Organization) for United States Army recruits with low reading ability, the program:

- Stresses the development and attainment of specific job-related, rather than general, reading skills.
- Uses reading materials from actual manuals and forms used in specific job placements.
- Increases basic job vocabulary and knowledge of job concepts.

The program comprises five instructional programs (or learning modules). The materials are geared for students reading at the 5th grade level and address the following areas:

Table of Contents – Teaches the functional skills needed to *use a Table of Contents.* The lessons include (a) practice in the performance of the skills of identifying and using the different parts of a Table of Contents; (b) locating items in a book from a Table of Contents.

Textual Material – Teaches the student to *extract information from textual material:* how to identify important information and to practice this on a variety of carefully designed examples.

Tables – Teaches the student how to *read tables* and how to *extract important information from them;* includes a variety of tables and examples for practice.

Graphs – Teaches the student how to *use graphs* and *obtain important information* which is presented in graphs and graphic displays; includes work with a variety of types of data graphs and pictorial graphics displays.

Indexes – Teaches the student how to *use indexes,* – to identify and locate items within an index, as well as how to locate a given topic within the test of a book itself.

The material can be used by a teacher in a classroom of 20-30 students, or in small groups, or as individualized self-paced instruction. Students often tutor their peers and assist the

instructor in record keeping. The program is performance-oriented and has application over a wide range of job or task-related topic areas.

The FLIT program is self-contained and special implementation requirements beyond a classroom are not required. Students using the program should have a decoding reading ability at about the sixth grade level for maximum effectiveness. Program can be implemented by a single student, a classroom, or a school system, depending upon the scope of needs. In March, 1974, FLIT was approved by the Joint Dissemination Review Panel of the United States Office of Education. The program has been cited by the National Right to Read Effort as one of twelve exemplary reading program in the nation.

ESSENTIAL ELEMENTS

- Identification of older students and adults with reading skill levels of sixth grade or below.
- Use of the five Learning Modules.
- Self-paced small-group instruction.
- Use of specific pre- and post-tests.

GOALS AND RESULTS

The primary objective was to increase the ability of students and adults with low levels of functional literacy to a seventh grade level, necessary for minimal job reading requirements.

Two types of assessment instruments were developed: (1) module proficiency tests administered before and after each learning module; (2) job-reading-task tests to provide overall measure of ability to perform job-reading tasks. To pass the module proficiency tests, students must successfully meet two criteria: 1) obtain a minimum score of 90% correct; and 2) complete the test in 20 minutes or less. There are three alternate tests for each form encountered in the module.

Data on the overall effectiveness of the FLIT program indicate positive statistically significant student gain in job-reading grade level. Average reading skills increased from Reading Grade Level 5.2 before training to 7.3 after training. In addition, gains made by FLIT students in general reading comprehension are consistent with gains made by students participating in other types of general reading instruction.

REPLICATION

Materials: They include the following, with cost.

Teacher's Manual $10.00

Contains instructions for using all the materials including procedures for providing self-paced and group instruction. Directions for module placement and testing, together with answer keys for all assignments and tests are also included.

Placement Test pad of 50, $4.30

Identifies strengths and needs of students; test results determine which learning modules each student requires. Placement test is also used as a post test to measure skill acquisition for the entire Functional Literacy program.

Learning Modules $3.00 each

The five FLIT instructional programs:

- Table of Contents
- Textual Material
- Tables
- Graphs
- Indexes

Module Skill Tests Pad of 50, $4.30 each

Assess proficiency in each instructional area included in the learning modules. Administered as a pre/post test, the results provide a record of student progress and skill attainment. A separate test for each module.

Student Practice Text $5.00 each

A text and study book designed to provide the student with experience in the functional utilization of skills taught in the five learning modules.

FLIT brochure, order form and sample materials are free upon request.

Training: Inservice training is recommended. No special network funding supports this project's dissemination efforts. HumRRO's staff members can discuss the program with groups of teachers and administrators. For large scale implementation efforts, inservice training workshops are available with follow-up services.

COSTS

Vary depending upon the amount of material ordered per student. Each module can be purchased separately. Average initial student costs for the full program are approximately $20 - $30, with continuation costs somewhat less.

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Basic Skills
—Reading
Alternative School
Grades 7-10

HIGHER HORIZONS 100

Hartford, Connecticut

OVERVIEW, DEVELOPMENT AND RATIONALE

This remedial reading program is designed for economically disadvantaged students in grades 7 to 10 with 1-4 years of reading retardation, but within normal range of intelligence and without serious emotional problems.

Since its 1965 inception, and throughout its twelve-year history, the program has provided an integrated remedial language, cultural activity and intensive counseling program to groups of disadvantaged students. Its goal is to develop and improve the language skills, self-concept, and school adjustment capabilities of these students. Started initially in one high school as a ninth grade demonstration center, and later expanded to include the seventh, eighth and tenth grades, the program serves 800 students each year. Services are provided within eight clusters, each of which is staffed by a team of five or six teachers and a guidance counselor. Because the cluster setting effectively separates HH100 youngsters from other students, the program maintains a school within-a-school atmosphere, characterized by small classes, individualized instruction, and intensive counseling.

The cluster uses teachers in the core subject areas of reading, English, language arts, math, science, and social studies, making its own determinations about grouping, curriculum development, cultural enrichment, and career awareness. Ongoing inservice meetings and summer workshops allow for staff development and interdisciplinary coordination.

The staff consists of a vice principal, four subject area teachers, two language specialists, a guidance counselor and a project assistant. Each team meets for one period once or twice a week to discuss individual student progress. Often parent conferences are held at the same time. Classes are kept small, averaging about 25 in content areas, and 12 to 15 in the remedial sections on speech and reading, grouped homogeneously. The daily schedule, flexibly organized, permits tutorial study halls, field trips, large group sessions and the like, all guided by a team leader, with the occasional help of college and volunteer tutors. Classroom organization varies according to subject and instructor-student preferences. In all cases, however, the emphasis is on individualization of instruction. Collaboration between instructors in the various subjects makes it possible for weaknesses in language arts and other classes to be remedied. HH 100 constitutes the total school experience for the selected students in each grade, with the exception of physical education, which is part of the regular school program.

Participants in the program are identified by their guidance counselors. The speech of many is affected by a second language or dialect. With a counselor-student ratio of 1:100, students are counselled frequently by the Higher Horizons counselor and instructors. In each team the guidance counselor serves as liaison between parents, students and staff. In addition to the regular program of individualized instruction, an articulated program of cultural activities, civic trips, and guest speakers is facilitated through curriculum flexibility. Not only is student growth assessed in each curriculum area, but a series of pre- and post-tests is given each year to measure the overall effectiveness of the program.

The program is funded through the Connecticut State Act for Disadvantaged Children. In 1971 it was reviewed as an exemplary program by the American Institute of Research; is one of five selected for national dissemination by the Right to Read Effort; and was validated in 1974 by the Joint Dissemination Review Panel of the U.S. Office of Education.

ESSENTIAL ELEMENTS

1. Identification of students by counselors.
2. Language remediation in all content areas.
3. Cluster teaching (team planning), forming a school-within-a-school.
4. Intensive counseling.
5. Cultural enrichment.
6. Parental and home involvement.

GOALS AND RESULTS

The broad objective is to develop and improve the reading/language performance in all content areas, accompanied by improved self concept and school adjustment capabilities. The specific objective is to enable students to make 8 months' reading progress during the school year, thereby regaining lost ground.

Pre- and post testing (September and May) used the Metropolitan Acheivement Test (MAT) for grades 7-9, Comprehensive Test of Basic Skills (CTBS) for grades 10, and a Pupil Self-Rating Scale. Average reading gain has been 1.5 years per group. In self-concept, approximately 80% of the students reported that HH 100 had made a positive change in their outlook toward themselves and in their school-related behavior. Furthermore, attendance was higher for students in the program over regular students based on a variable school average.

REPLICATION

Materials: There are no special materials for purchase. The need for materials varies, depending upon availability in the district of suggested materials. Materials are selected to appeal to student interest and abilities. Extensive use of audio-visual equipment is made in all classes, and a paperback library is available for home use. Audio-visual materials include tape recorders, television receivers, filmstrips, and movies. An adopting district may have to make an initial investment in certain audio-visual aids and remedial devices, since these tend to be more abundant and varied in HH 100 than in a regular school program. Special facilities needed are a set of contiguous classrooms.

Training: Pre- and inservice training experiences are necessary. The staff spends four weeks in the summer planning the year's program, training new staff, reviewing student profiles, and meeting the incoming students and parents through home visits. The staff meets once weekly during the year for critiques, planning of activities, and discussions of individual students. No training is conducted at the demonstration site. Project staff will visit adoption site to train personnel, with adopter paying staff costs, since no special funding supports the projects dissemination. Visitors are welcome by appointment.

COSTS

Of implementation: Since the school-within-a-school concept primarily involves curriculum reorganization, costs above regular costs are moderate. Start-up costs vary in terms of the materials already available in a school.

Of maintenance: Approximately $250 per pupil over and above the cost of students in regular school program.

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Basic Skills
—Reading
—Math
Grades 6-8

HIGH INTENSITY TUTORING (HIT)

Highland Park, Michigan

OVERVIEW, DEVELOPMENT AND RATIONALE

High Intenisty Tutoring is an individualized instruction program in basic skills designed to develop vocabulary and comprehension skills (in the Reading Center), and to increase computational abilities, problem-solving skills and understanding of mathematical concepts (in the Math Center). The program uses student tutors at least 2 grade-levels above the student tutees in reading and math, who also need help in basic skills which they receive through tutoring. Students in 6th, 7th and 8th grades identified as one-year below grade level in reading and math tests are selected for HIT participation. Placement tests are then used to assign students in the sequence of booklets used in the program.

The HIT method actively involves tutors, tutees, a certified teacher, and two paraprofessional aides. Tutoring focuses on peer-teaching and reinforcement techniques developed primarily from principles of programmed instruction. "Tutors" from grades 7 and 8 assist sixth grade "tutees" in developing grade-level skills. This interaction also helps the "tutors" up-grade their own skills.

Program work is performed in two centers, reading and math operating in the same school, each staffed by a certified teacher and two paraprofessional aides. The teachers, chosen by the principal and project director from within the school system, manage the centers and monitor tutoring. The aides assist the teachers in monitoring and charting the daily progress of students, and distributing rewards. The student/staff ratio is usually 8:1. Five daily tutoring periods of 30 minutes each, are scheduled for each center.

Tutees leave their academic classes to participate each day in half-hour tutoring sessions in the reading and math centers. Usually, tutees attend both centers. Tutors attend three sessions a week, missing a different class each day, and are assigned to one center. Tutees in the program during sixth grade are given priority selection as tutors in seventh and eighth grade when skill deficiencies in those tutees still exist. This highlights the importance of reciprocity in the teaching-learning relationship, despite the small differences in ability between tutors and tutees.

During the half-hour tutoring sessions tutees and tutors work in pairs, with 10-12 pairs of students in a center at one time. The first 10 minutes of the period are devoted to quick drill through word lists, flash cards and drill sheets; the remaining 20 minutes are used for programmed reading and math workbooks which offer accurate and immediate correction.

As pairs are working, teachers and aides circulate, to make sure that the tutoring is going smoothly, that proper materials are used, that adequate feedback is provided, that the proper number of points are recorded, and that questions are answered. This high intensity instruction substitutes rapid basic skills practice for discussion, inquiry, or lecture methods.

At the end of the period, records are updated and preparation made for the next session. Programmed and drill materials are carefully assigned so that students obtain over 90% accuracy in their daily work. Student progress is assessed through pre- and posttests and standardized tests such as the Wide Range Achievement Test. Tally sheets and "bankbooks" are used to record classwork performance, with daily progress charts maintained by teachers and aides.

The program comprises two basic components: an instructional system and a motivational system. The primary features of the instructional program are: (1) daily calculation of the percentage of correct responses for each tutee and (2) use of instructional materials that carefully control introduction of new concepts and incorporate frequent review. The motivational system is crucial to optimal student progress. Tutees receive points for correct responses which accumulate in a "bank book" and are redeemed for tangible rewards. Tutors receive points and rewards on the basis of attendance. (Rewards are often field trips).

Originally developed as a Title I project, the program was approved in 1974 by the Joint Dissemination Review Panel of the U.S. Office of Education and was selected as one of six exemplary projects for national dissemination through Project Information Packages (PIPs).

ESSENTIAL ELEMENTS

- Identification of students with basic skills levels (in reading and math) of 6th grade or lower.
- Use of a high-intensity instructional system with cross-age tutoring comprising tutees, tutors (2 grade levels higher), teachers and aides.
- Use of a motivational system using rewards as incentives.
- Ongoing assessment of student progress.
- Use of special classrooms designated as math centers and reading centers.

GOALS AND RESULTS

The goal was to improve the performance of students in grades 6-8 who were one to five years below grade level in reading and math.

Evaluation data show that gains in math and reading exceeded expected gain for non-participants, and moved participants closer to national norm. Gains ranged from 1.2 to 3.7 months for each month in the program for both tutees and tutors on the WRAT (Wide Range Achievement Test).

REPLICATION

Materials: Two centers are needed (one math, one reading) located near the students' regular classes. Approximately 10 pairs of student desks are needed. The room should have areas for display materials, bookcases, teacher's desk, and file cabinets. Materials

used include: Sullivan Programmed Reading; Sullivan Programmed Math; Hegge, Kirk & Kirk Remedial Reading Drills; Veri Tech Math Teaching Aids; Bernell Loft Reading Kits; EDL Math Materials. Teacher-made and commercial supplementary materials such as flash cards, clocks, games are also used.

A Project Information Package (PIP), describing how to install the successful features of the project is available; it contains a Teacher's Manual a Training Manual, Project Management Directory, Evaluation Manuals and Project Orientation Materials, (including filmstrip/cassette tape, four-page illustrated brochure for educators, and the guidebook, *Presenting High Intensity Tutoring*).

Set of detailed manuals on project from all angles may be purchased from HIT or from the Educational Supply Co., Boulder, Colo. Only serious potential or committed adopters should purchase PIP. Contact HIT for details. Descriptive brochures are available free of charge.

Training: Inservice training for teachers and aides is given in a two-week training workshop before the school year. During the school year, weekly informal inservice sessions are held. Training is conducted at the project or adapter site. Visitors are welcome at the Developer site from October 15 through May 1.

COSTS

Of implementation: These vary with individual needs of the adopting district. Assuming no available facilities, start-up costs approximate $5000 per center. The program qualifies for Title I funds.

Of maintenance: There also depend upon the special needs of the adopter. Most instructional materials are reuseable, If salaries of teachers and aides are included, yearly operating budget for a reading center is approximately $26,000, or $200 per pupil considering tutees only; if tutors are also considered (they benefit from program), per pupil costs are cut approximately in half. Yearly budget for operating math centers is approximately $25,000, or $175 per pupil for tutees. Operational costs are approximately 85% personnel-related.

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Basic Skills
—Reading
Grades K-12 and Adults

HOSTS – HELP ONE STUDENT TO SUCCEED (Vancouver School District No. 37)

Vancouver, Washington

OVERVIEW, DEVELOPMENT AND RATIONALE

HOSTS is a diagnostic-prescriptive-tutorial approach to basic reading skills for students in grades K-12 and adults in need of remedial reading. Designed to improve their reading ability levels, the program uses the community's human, material and physical resources, relying heavily upon volunteers to act as tutors for its students. The program was developed with Title III funds following identification of improvement needs in the districts reading program by two surverys conducted by the State Department of Public Instruction and a Citizen's Committee.

The HOSTS program operates from a reading resource center containing a wide variety of instructional materials and audio-visual equipment. Students in the HOSTS program are evaluated, then individual prescriptions are designed which match coded instructional materials to identified reading deficiencies. Informal reading inventories are used to screen and identify target students, who are then given criterion-referenced tests which pinpoint individual reading deficiencies. From these tests a reading profile is developed by the reading specialist, who records the student's ability levels in the various skills areas.

The HOSTS Cross Referencing manuals are used by the instructional staff to plan prescriptive programming tailored to individualized needs. Supplementary reading materials such as magazines, paperbacks, and commercial and teacher-made games are incorporated into the individualized instructional activities as well. The student reading profile contains: the results of the student assessment process; student growth in vocabulary and comprehension as measured by the Gates-Mac Ginitie Reading Test, the Nelson Reading Test and criterion-referenced tests; specific directions for tutor implementation of the prescribed program lessons; and daily student progress recorded by the tutors.

Teaching procedures in the HOSTS program enable teachers to discover the abilities of each student and allow each to advance at his own learning rate. The instructional climate is humane and reflects concern with each student's worth. Community volunteers work as tutors on a one-to-one basis with program students following the prescriptions developed for each student by the reading specialist. The Tutor Training Manuals are used as part of the HOSTS training program for community volunteers.

The staff of the HOSTS program consists of a project director, secretary, reading specialists, teacher aides, and community volunteers. The project director coordinates the program,

directs training of teachers, aides and tutors, and completes project evaluations. The reading specialists are the key element to the coordination of all resources - material, physical and human - available to help students learn to read. Their duties include: diagnosis, prescription, and supervision of the reading process; assistance in the recruitment of volunteers; implementation and evaluation of the reading program with dissemination of its results. A teacher aide assists the reading specialist in an instructional capacity.

The Reading Center must be centrally located in each school building, preferably adjacent to the school's media center, it contains all instructional materials for the HOSTS program. A reading specialist and one teacher aide staff the center and coordinate the scheduling of prescriptive programming and tutoring sessions. HOSTS also provides an adult education program for illiterate adults, which operates in conjunction with the local community college.

HOSTS was nationally validated and approved for dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education. It was one of 48 projects which received the Educational Pacesetter Award of the National Advisory Council on ESEA Title III.

ESSENTIAL ELEMENTS

- Identification of students and adults deficient in basic reading skills.
- Individualized, self-paced instruction based on diagnosis and prescription using criterion referenced tests and individual reading profiles.
- A reading resource center, staffed by a reading specialist and aide.
- Use of community volunteers as tutors and community's material and physical resources.
- Humane instructional climate reflecting concern for each student's worth.
- Record – keeping profile system.

GOALS AND RESULTS

1. To identify accurately students' needs and to measure individual progress.
2. To improve the reading ability of students in grades K through 12, and of illiterate adults.
3. To involve community members actively in the reading program.

Program objectives ranged from expecting students in grades 2 and 3 to raise their achievement levels in vocabulary and comprehension an average of .7 years after 7 months of instruction, to expecting students in grades 10 through 12 to gain 1.25 years in the same period of time.

Evaluation used a pre- and post-test research design which employed standardized tests (Gates-Mac Ginitie's in grades 2-6 and Nelson Standardized Reading Test – grades 7-12) to measure vocabulary, comprehension and reading rates. Scores indicate that, on average, HOSTS students doubled their learning rate: primary level students progressed at the rate of 1.08 years, junior high students at 1.16 years, and high school students at 1.57 years. These findings of substantial gains for junior and senior high school students were

particularly encouraging since most remedial programs have a diminishing impact at those grade levels. Such results coupled with the low per-student cost make the program valuable.

REPLICATION

Materials: Special facilities or equipment needed:

- Adequate space in the school building for a Reading Center;
- Office space for project director and secretary;
- Buses for transportation of volunteers from the junior and senior high schools;
- A minimal amount of audio-visual equipment for use in prescriptive programming.

Material that must be purchased:

- HOSTS Cross-Referencing manuals ranging from readiness through junior high, available at $125. per set;
- HOSTS Tutor-Training manuals at a cost of $10 per copy;
- Formal and informal test instruments and supplementary instructional materials, if not currently available in the district.

Training: Five-day workshops are offered by HOSTS staff at project or adapter sites to train reading specialists, staff members and volunteers prior to implementation. After eighteen hours of initial training, a schedule is developed by the reading specialists to provide weekly training to the volunteers, and monthly inservice sessions for program staff members. School districts desiring HOSTS are selected on: (1) needs assessment, (2) district's resources (commitment), (3) evaluation plan, (4) willingness to serve as a model for others. Potential adopters are asked to send key personnel to visit the developer project; if still interested they may apply to become HOSTS sites.

COSTS

Of implementation: Start-up costs range from $30 to $115 per student, depending upon existing resources.

Of maintenance: From 50 cents to $12 per student, depending upon existing resources.

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IMPROVEMENT OF BASIC READING SKILLS (IBRS)

Sylacauga, Alabama

OVERVIEW, DEVELOPMENT AND RATIONALE

This diagnostic-prescriptive individualized remedial reading program is conducted in school-based Reading Centers for educationally deprived children, grades 1-8. Participants are students with I.Q.'s over 80 who are reading 6 months or more below grade level, as identified by standardized tests, diagnostic tests, cumulative record cards, teacher opinions and learning disabilities. Initiated in 1966 as IBRS Reading Centers, gradually, with Title I funding, the teacher-aide parent-involvement components were added.

Designed to encourage students to experience success, maintain motivation and gain confidence, the program combines many types of instructional activities and equipment in special Reading Centers, staffed by a reading teacher and an aide who work with 10-12 children per period every day throughout the term. A guidance counselor is available to test children with unusal problems and to help initiate new programs. Depending upon grade level, each student spends from 30-55 minutes daily in the IBRS Reading Center.

Diagnostic tests are administered to determine specific needs of the children. A "Need Sheet" is prepared for each child providing a written prescription to help master basic reading skills and reinforce classroom learning. A "Weekly Plan" sheet is maintained for each class listing plans for each child. Teacher aides and parents work with children needing additional help over and above help received in the classroom and reading center. Parent participation, through volunteer work and workshops, is a significant aspect of the project. Individualized attention shows the pupil that he/she is important and can excel in some way, reinforcing the primary goal of the project: to meet individual needs of students and help them achieve their potential. An individual file folder, maintained for each student, contains diagnostic and prescriptive data and progress reports on identified skills objectives. Continuing evaluation reports are made by the Reading Center teachers based on the results of spot-testing carried on throughout the year on the alternate forms of the Gates-MacGinite tests.

The program has served approximately 5000 children experiencing educational problems. Validated in 1974, it was approved for national dissemination by the Joint Dissemination Review Panel of the U.S.O.E. and its materials were selected for nationwide diffusion as a Project Information Package (PIP).

ESSENTIAL ELEMENTS

- Selection of pupils based on standardized tests followed by diagnostic testing using many instruments.
- Use of Reading Centers staffed by a reading teacher and an aide.
- Daily instruction on an individual or small-group basis throughout school term.
- Use of many commercial materials.
- Record-keeping system.
- Active parental involvement.

GOALS AND RESULTS

- To provide remedial instruction in reading readiness skills and basic reading skills to children in grades 1-8 who are experiencing difficulty in school.
- To help each student build a positive self-concept.
- To involve parents actively in all components of the IBRS program.

Results of pre- and posttesting on appropriate levels of the Gates-MacGinite Reading Test indicated that the program exceeded its objectives at the primary, upper elementary and intermediate grade levels. During 1974-75, the average gain of the 315 students participating throughout the academic year was 1.6 years in grade equivalents. Twenty-eight students who participated for less than nine months averaged a 1.5 year gain. In addition, participating students improved in subject area grades, school attendance, attitudes and health habits.

Teacher pre- and postratings on a project-designed Scale of Reading Attitude Based on Behavior indicated a substantial improvement on ten criterion behaviors; and parent questionnaire responses indicated positive assessment of the program with:

- 94% indicating that their children read better as a result of participating in the program,
- 99% stating that their children's attitudes toward school improved,
- 85% reporting that their children read at home, and
- 92% indicating that grades in other subjects improved.

REPLICATION

Materials: These are available in a Project Information Package (PIP) packaged by U.S.O.E. for nationwide diffusion. Bound in a 3-ring binder, it provides complete description of project and includes orientation material, management directory, teacher's manual, management calendar, staff development manual and evaluator's manual – ($30.00). Also available are:

- PIP Slide-tape ($20.00)
- Training Kits-containing all IBRS checklists, teacher's manual and general information for implementation of IBRS ($7.50)
- Materials/Equipment List (free) - listing all core program and materials in the IBRS project, sources, addresses, and approximate costs.
- Awareness brochures (free) - 8 page description of the project.

The wide variety of materials used in the program must be purchased if not already available in the district, such as diagnostic instruments and materials, the Hoffman Reading Program materials, and numerous supplementary reading program materials and games.

Facilities must be available for a Reading Center staffed by a teacher and aide, with space for related materials and special equipment, such as: controlled readers, cassette tapes and tape recorders, overhead projectors, filmstrips and filmstrip projectors, records and record players, listening centers, student carrels, tachistoscopes, stopwatches, flashcards, and duplicating equipment.

Training: Two and one-half days of preservice training are provided each year at the project site for Title I Reading Center teachers and teacher aides. Monthly inservice sessions are held during the school year. Reading Center teachers and teacher aides assist in planning the inservice training program. Training for adopters is conducted at the project site or, when necessary and feasible, at the adopter site. Visitors are welcome by appointment.

COSTS

Of implementation: These vary with the materials, equipment, and facilities available in the district, and with the extent of implementation. Initial program costs in Sylacauga City District were approximately $364.00 per pupil.

Of maintenance: A total of $331.77 per pupil based on 467 students including administrative and instructional personnel, materials and equipment, and continuing inservice training.

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Basic Skills
--Reading
Grades 10-12, 7-9

IMPROVING ACHIEVEMENT THROUGH USE OF TEACHERS AND TEACHER AIDES

Logan, Utah

OVERVIEW, DEVELOPMENT AND RATIONALE

A Title I compensatory education program, it offers remedial assistance in reading to high school students in grade 10-12 who read at least 2 years below grade level and are functioning poorly in two subjects. (The program can be adapted to grades 7-9). Using an individualized diagnostic-prescriptive approach, it remediates the reading deficiency through personalized and concentrated interaction: personnalized in that the adult-student ratio is usually one-to-one, using special reading teacher and 8 aides to supplement the regular teachers instruction; concentrated in that instruction occurs daily, one period per day in a resource room or reading laboratory.

Each individual's reading skills are thoroughly analyzed during the first few weeks. Instruction and rebuilding of attitude begin on a personalized basis at the point of identified deficiency.

A variety of learning activities and materials is used, such as oral drills on all aspects of reading and communication, reading and word games, filmstrips, and audio-visual aids in reading laboratories. Once or twice a week the student spends some time with controlled readers to help increase reading speed, vocabulary, and comprehension. Discussions between aides and students are stressed. The importance of personal interest and positive reinforcement by the adult aide cannot be over emphasized. Reading instruction develops within the context of the total language curriculum. Student progress is assessed through the Gates-MacGinities Reading Test, given on a pre- and post- test basis. Individual records are kept of areas of weakness and patterns of improvement.

Developed under Title I funding, the project was validated and approved by the Joint Dissemination Review Panel in February 1975.

ESSENTIAL ELEMENTS

- Specific identification of students and needs.
- A personalized approach through use of a special reading teacher and eight aides to supplement regular teacher.

- A concentrated approach through daily instruction, one period per day.
- Use of a resource room or reading laboratory.
- Diagnastic-prescriptive individualized instruction with use of pre- and post- tests.

GOALS AND RESULTS

Two objectives relate to the cognitive and affective areas

Goal #1

Cognitive: Students will show an average two-month grade equivalent gain per month in reading speed and accuracy, reading vocabulary and reading comprehension.

The Gates-MacGinite Reading Test was administered on a pre- and posttest basis to all participating 10th, 11th, and 12th grade students. Results indicated that they achieved a composite average monthly gain of two grade equivalents per month from pre to post. The previous history of the target students indicated that their expected gain was 3.0 months (or less) for the entire academic year. Thus, the data suggest that the program makes a substantial impact upon student reading scores. In addition, teachers reported that most of these students showed improved reading ability and improved academic work in their most difficult subject areas.

Goal #2

Affective: Students will improve their attitudes towards themselves and towards school.

Discussions with teachers, students, and the Parent Advisory Council indicated that students showed considerable enthusiasm for the project and especially enjoyed participation in the varied reading activities, thereby providing some evidence of improvement in the affective domain.

REPLICATION

Materials: Awareness descriptive materials are available. All instructional, management, materials used are commercially available. No particular products or systems are stressed. An eclectric approach is used to prescribe materials as needed. Materials used successfully by the project to attain improved reading speed, accuracy, vocabulary and comprehension comprise: controlled readers, commercial workshops, reading and word games, filmstrips, records, tape recorders and other audio visual aids. Special resource rooms or reading labs are recommended to promote individualized instruction.

Training: Title I teachers should be trained by the project staff before implementing the program. Aides also must be trained in the necessary skills.

Operational strategies of the program are described in awareness materials. On-site demonstrations enable interested educators to see the program in operation. No training is conducted at the project site, but may be conducted at adopter district.

COSTS

Of implementation: Start-up costs are approximately $200-$225 per student (based on 180 students). This includes salaries of one project teacher and eight aides, as well as costs for materials, equipment and inservice training.

Of maintenance: Annual costs remain relatively consistent, allowing for inflationary increases.

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Basic Skills
—Writing
Grades 1-12

INDIVIDUALIZED LANGUAGE ARTS: DIAGNOSIS, PRESCRIPTION AND EVALUATION

Weehawken, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

This project was designed to develop effective methods of analyzing students' writing, and to prescribe and apply individualized instructional techniques to teach greater writing facility. The project's rationale is that linguistics, the study of language, provides knowledge which can be translated into techniques for improving writing instruction. These techniques can be blended with a language-experience approach, so that the language, feelings, and ideas of students can be used to promote motivation, precision, and control. Such instruction uses writing activities in all parts of the curruculum and can be organized within a diagnostic-teaching framework. Teachers and students can thus have continuous diagnosis of the writing needs, prescription of relevant methodology, and evaluation of results.

The project staff devised both a method for teachers to analyze students' writing, and guidelines, strategies and specific examples of how to teach writing. The method also includes ways for teachers to develop and reinforce other language arts skills. The approach can be used with either graded or non-graded classes in any kind of classroom organization.

Students' writing development is traced by three samples taken at three intervals during the year. The evaluation of the samples, based on criteria suggested by language arts experimentation and the Weehawken teachers, pinpoints each student's current strengths and needs. Writing instruction is related to speaking, listening, and reading activities, as well as to the student's ideas and feelings through a "communication spiral" linking composition to real-life experience as well as to other language arts.

The program is used in grades 1 to 12 throughout the Wehawken public schools. The student population is highly mobile and includes many students for whom English is a second language. The program's methods and materials were developed cooperatively by the project staff, Weehawken administrators and faculty members, and the students themselves, with consultant help provided by Professors Ezor and Lane from Jersey City State College. In Weehawken the program has completely replaced writing workbooks and textbooks. It may be fully integrated into any curriculum. The program is fully explained and illustrated with examples in a teachers' manual. No additional reference materials are required.

Validated in 1973, the project was approved in 1974 by the Dissemination Review Panel of the United States Office of Education for national dissemination and is currently used by

44 districts in New Jersey and over 40 in other states. Adopter districts serve rural, suburban and urban populations.

ESSENTIAL ELEMENTS OF THE PROGRAM

The program's replication is defined by 1) diagnosis of students' writing needs, 2) prioritization of local objectives for students' writing, 3) prescriptive teaching according to the techniques described in the program's manual, 4) evaluation of students' progress, and 5) use of the writing program in content and skill areas such as science, reading, etc.

GOALS AND RESULTS

The primary goal of the program is to enable students to write syntactically sophisticated sentences, to develop a rich and varied vocabulary, and to punctuate and spell correctly.

The Weehawken project has been subjected to a number of evaluations, all of which have demonstrated the success of the program in improving students' writing ability. The first evaluation, conducted in 1970-71, was based on a statistical evaluation of random samples of papers written eight months apart by Weehawken students in grades 3 and 6 and compared to that of control groups in a nearby district. An evaluation was also made of continuing Weehawken students in grades 4 and 7.

The evaluation, based on eleven criteria selected from research and teachers' diagnoses, showed that the Weehawken students learned to write longer, richer, and more varied sentences, using longer dependent clauses, combining more series of words, and moving parts of their sentences around to a larger extent to vary their writing style. Above all, the students tended to write a higher proportion of complex and compound sentences and fewer simple sentences, one of the surest signs of growth in writing. They also had a better grasp of punctuation and correct spelling. A second year follow-up study showed continued improvement in writing by the same students.

Subsequent evaluations conducted in 5 consumer districts (urban, suburban and rural) in New Jersey and one (suburban) in New York have consistently shown superior gains for project students in vocabulary, organization, grammer, spelling, punctuation and sentence structure.

The program proved itself equally effective on the college level. In a state college in New Jersey, freshmen taking remedial-writing courses were given pre- and posttests of writing proficiency and wrote sample themes. Twice in a row, the classes which registered the highest average gains were those taught by the four instructors (out of a dozen) who had used elements of the program. It is noteworthy that the students who showed such gains in these remedial classes had failed to respond well to conventional methods of teaching Composition all during their elementary and high school careers.

REPLICATION

Materials: No other workbooks, textbooks or reference materials are required other than the project manual listed below:

– **Teachers Resource Manual** – A complete description of the program

and methods for its implementation. Appropriate for writing instruction at all grade levels, in content area as well as in Language Art and English. $10.00

- **Individualized Language Arts:** A Prospectus 1.00
- **Overview Brochure** Free
- **Filmstrip** – A 20-minute overview filmstrip (may be loaned) $20.00

No special facilities or equipment are needed.

Training: Teachers and administrators require a two-day training before implementing the program. Training workshops are conducted regularly in New Jersey and elsewhere by arrangement. Additional periodic one-day advanced-training workshops are held for adopters. Visitors are welcome at the project site from October 15 through May 15.

COSTS

Of implementation: Costs relate to purchase of the Teacher's Resource Manual at $10.00 and to staff training. Provision must be made for continuing staff supervision and support. A single copy of the manual will serve several teachers. Training is provided by project staff free of charge; however their expenses must be paid for out-of-state training.

Of maintenance: No costs; in fact savings are effected if use of commercial workbooks and texts is discontinued.

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LEARNING TO READ BY READING

Jamestown, California

OVERVIEW, DEVELOPMENT AND RATIONALE

This program employs a multimedia remedial reading system for students in grades 4-12, but applicable to all students below expected grade level, including nonreaders and adults. Its purpose is to increase reading levels and motivate students to improve their self-image by learning.

The program is divided into 6 blocks of training, each approximately seven weeks long, three hours per day, five days per week, taught by an instructor assisted by a teacher aide. Classrooms are divided into learning stations for individual learning activities, with students most in need of remediation sitting closest to the teacher.

The program comprises two major components: *reading-with-symbols* books and *read-along* materials. Reading With Symbols begins at primary level and progresses through tenth-grade level; it is a new approach to phonetic and sight word vocabulary development.

Students first entering the program are exposed to a series of spelling tapes that provide phonetic training. Once certain consonant and vowel sounds are mastered, students are introduced to the reading-with-symbols books, twelve booklets ranging in difficulty from the second grade to high school. Symbols representing 34 basic sounds are small pictures of familiar objects. Students learn symbol-sound relationships in less than one week. From that point on, they read orally daily until they have progressed through the set of cued readers. After completion of the first six books (2.0 to 4.5 reading level), a reading of the identical stories in the uncued version is carried out. This cued reading provides a bridge to regular reading and an opportunity to teach the more significant conventional rules of phonics.

Students then proceed on their own using as the "read-along" materials 24 half-hour short-story segments, nine one-hour radio plays, and captioned filmstrips; there provide assistance in reading and are used either with upper-level Reading-With-Symbols materials or singly for students at higher reading levels (5-8).

Assessment and evaluation of student progress are made through individual oral readings to the teacher at any time the student feels ready. These oral exercises enable the teacher to help the student with word attack skills, and to emphasize knowledge and practice of phonetic patterns.

The program is applicable to remedial groups within a conventional classroom or to specially equipped remedial classes.

Originally funded in 1970 as a academic-vocational program for illiterate penal inmates, the method and materials were later adopted for use with school children in a developmental as well as remedial setting. In 1974, the project was selected by the Right To Read Office as one of twelve exemplary reading programs. It was validated and approved by the Joint Dissemination Review Panel of the U.S.O.E. in early 1974, and is funded for national dissemination by the national Diffusion network.

ESSENTIAL ELEMENTS

- The phonetic-symbol teaching approach.
- Reading-With-Symbols books.
- Daily oral reading.
- Assessment of student needs.
- Classroom divided into learning stations.

GOALS AND RESULTS

The major objective is to raise the reading level of students.

Students were administered the Gates-MacGinitie Reading Survey on a pre- and post test basis. Results indicated that students made average reading gains of 2.05 years over a seven week course. Students not exposed to the program (enrolled in a normal classroom) gained only three months in reading over the same time period. Some students at 4.0 made four or five grades' gain using "reading-alongs" exclusively. Clinton High School (Iowa) reports 2.3 years' average gain in seven months with remedial classes. Rock Springs, Wyoming, reports success with students disgnosed as incapable of learning to read.

REPLICATION

The preponderance of adoptions have been in junior high and senior high school remedial reading classes.

Materials: The project staff has prepared for program use the following:

– **Begining-level set of 8 Reading With Symbols (RWS)**	**$80**
– **Set of two uncued readers**	**$20**
– **Flashcards**	**$5**
– **Set of 34 rubber symbols stamps**	**$50**
– **Read-along radio plays (9 available) on cassette with script**	**$10 each**
– **Read-along short stories on cassette with script**	**$7.50 each**

Starter set of materials for class of 15 is $497.50 or $33.20 per student. Descriptive awareness brochures and portfolios of specimen materials are available free of charge.

Spacing requirements for small group and individual instruction can be worked out in regular classrooms and other locations within a school. Classrooms should be provided with some type of learning carrels and individual cassette players equipped with headsets.

Training: Visitations to the project site can be arranged. Training is required to ensure effective application of materials and methods. Prior to implementation, 15 to 30 hours

of inservice training include simulations, demonstrations, and training in the production of materials. Sessions should be limited to 20 participants. Training is conducted at the project or adopter site.

COSTS

Of implementation: These relate to purchase of materials (listed above), inservice training for administrators and teachers, and consultation services, negotiated on an individual basis.

Of maintenance: Minimal since most of the materials are nonconsumable.

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PAL: PUPILS ADVANCING IN LEARNING

Adams County School District No. 12
Denver, Colorado

OVERVIEW, DEVELOPMENT AND RATIONALE

PAL is a supplementary program for students in grades 1-12, deficient in reading skills, and with poor attitudes or low self-concept. Designed to improve reading skills, it uses many motivational techniques and creative methods for individualized instruction. Individualized learning experiences are designed for each student directly correlated to diagnosed needs and strengths. Success-oriented activities include the provision of reading material at the student's own level, personalizing instruction, and setting a series of short-term goals which the student can meet, advancing at his own rate. PAL uses a wide variety of materials, equipment, methods and activities. The secondary objective, to improve attitudes toward school and self, involves use of diverse image-building activities. Management strategies provide a sound structure for the program.

Program and classroom organization vary with the different buildings and teachers, depending upon the grade level and number of students per grade served. The number of classes, student groupings, scheduling (usually daily), class length (variable from 40-60 minutes), inclusion in regular curricula, and adult-student ratio (variable from 1:1 to 1:12) are determined by the particular needs of the school district. The program calls for the use of aides, and in lower grades, strong emphasis is placed on parent involvement.

At junior high school level, P.A.L. students are assigned individualized instruction schedules planned by both the student and the teacher; large class and small group organization is used for specific skill areas, as well as for special interests, values clarification, self-image, and attitude. Individual instruction or small group work provides reinforcement experiences.

At the senior high school level, student programs are individualized for specific skill. Activity grouping also occurs determined by common interests and purposes. Student needs and skill levels are determined by the Comprehensive Test of Basic Skills and district-developed criterion-referenced tests. A Communications Skills Survival Program includes the development and extension of such language skills as reading, writing, speaking, media literacy, and reference and study skills. Students are free to select among suggested activities in a resource unit. Skill mastery is assessed through teacher-made tests. Diagnosis, prescription, and remediation are continuous and are based on both test results and demonstrated needs.

Developed under Title I funding, PAL was validated and approved by the Joint Dissemination Review Panel in 1973.

ESSENTIAL ELEMENTS

- Identification of student needs and skill levels
- Individualized instruction, with continuous diagnosis and prescription
- Organization of classes for specific skill areas
- Activity grouping
- Stress on values classification, attitude and self-image
- Strong emphasis on parent involvement in lower grades

GOALS AND RESULTS

PAL has two major goals - cognitive and affective.

GOAL #1

To improve reading skills through mastery of individual objectives.

The Comprehensive Test of Basic Skills assessed student progress in the three cognitive areas of reading, math and language arts. Specifically, the intent was to determine whether or not students exposed to the program had reduced the discrepancy between their obtained and anticipated grade equivalent scores by a minimum of 50%. Results indicated the following: a) In reading, 53% of the participating students met the specific objective; b) in mathematics, 100% of the students achieved the objective; c) in language arts, 61% of the students mastered the objective.

GOAL #2

To improve attitudes towards school (in areas of reading and math) and self

Teachers were asked to indicate whether or not students had improved in their attitudes towards reading and math as a result of program participation. A project-developed Behavior Rating Scale was employed on a pre-post test basis to assess changes, measuring the following behaviors:

Self-Scale	Positive attitude toward reading
Happiness toward reading	Participation in math
Participation in reading	Completion in math
Completion in reading	Successful math
Successful reading	Positive attitude toward math

The results showed a statistically significant difference between the pre- and posttest ratings, indicating that students did improve in their attitudes toward reading and mathematics.

In summary, for each school year in the program, the average PAL student gains more than one year in reading skills (1.1 in comprehension and 1.4 vocabulary) according to the Comprehensive Test of Basic Skills (CTBS). District-developed surveys indicate substantial improvement in attitude and self-concept.

REPLICATION

Materials: The following materials are available from the project:

- Instructional Program Kit (includes teaching units) Information about the program, elementary and secondary, including units, strategies, games, and communication techniques. $4.00
- Program Management Manual. Details needs assessment, planning, implementation, operation, evaluation, dissemination. $4.00
- Staff Development Kit. Information on inservice, needs assessment, operation and evaluation, Reading in Content Areas, workshops, activities and ideas. $4.00
- Parent Involvement Guide. Information on parent/community involvement, training, workshops, resources, etc. $4.00

PAL encourages the use of a wide variety of creative materials including commercial and teacher-made materials, audio-visual aids, games, newspaper, and magazines. It does not require special facilities or equipment.

Training: Visitations to project are limited and must be prearranged. Inservice training is necessary for program implementation. Training is conducted at the project site, details of which are included in the Staff Development Kit. A timeline for implementation can be set up with adopters for whatever sections of the program will be implemented.

COSTS

Of implementation: These vary with resources available in adapter districts, with minimum per student cost of $10.

Of maintenance: A minimum of $10 per student should be budgeted to maintain the program annually.

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PRE–ALGEBRA DEVELOPMENT CENTERS

Chicago, Illinois

OVERVIEW, DEVELOPMENT AND RATIONALE

The Pre-Algebra program was designed to enable eighth grade students to develop the computational and conceptual skills necessary for success in high school algebra. As an 8-week summer program, it can be applied to remedial high school and regular seventh and eighth grade math classes. Students' needs are determined by the Standard Achievement Tests followed by individually administered diagnostic tests, thereby indicating group and individual weaknesses.

Combining diagnostic-prescriptive techniques with self-directive activities, the curriculum is divided into five interrelated instructional units: Ratios and Proportions, Fractions, Decimals, Percent, and Measurement. All curriculum materials are based on five unifying mathematics principles – ratios and proportions, the property of one, place value, additive properties and subtractive properties – which serve as a foundation for the teaching of all other concepts.

The instructional approach is a 4-phase LCD (Laboratory, Classroom, Diagnosis) Technique involving mathematics laboratory experience, classroom instruction, individually prescribed remediation of mathematics deficiencies, and supplementary math-related reading instruction with a trained reading teacher. During the eight-week summer session, students spend 55 minutes each day in each of the four phases. The 4-phase LCD Technique was developed to provide diversified learning situations. In the *laboratory,* students are given "hands on" experience with math manipulatives, working individually or in small groups. The *classroom* situation permits guided group instruction. The *diagnosis* and remediation phase allows individual work on skill deficiencies, with self-help materials. The fourth phase provides individual and group *reading instruction* for students with low achievement scores in problem-solving areas. The program requires an area for the lab, as well as for group instruction.

Developed in 1971 under an ESEA Title III grant, the Pre-Algebra Project was validated in 1973 and approved by the Joint Dissemination Review Panel in 1975. It has received an Education Pacesetter Award.

ESSENTIAL ELEMENTS

- An eight-week summer math program conducted prior to study of algebra
- Five curriculum units: ratios and proportions, fractions, decimals, percent and measurement
- Five basic math principles underlying all curriculum units – ratios and proportions, property of one, place value, addition, subtraction
- Four-phase LCD instructional approach—laboratory, classroom, diagnosis (individualized) and remediation, and math-related reading

GOALS AND RESULTS

The primary objective is to provide students with the computational and conceptual skills necessary for success in algebra. Additional student goals relate to responsibility for self direction and improved ability to assess learning needs.

Program effectiveness was assessed in terms of immediate improvement in math and of long-range impact on student achievement. An evaluation of program impact during the summers of 1972-1974 revealed that students attained all objectives relating to academic attainment: a comparison of pre- and post-test scores on the Metropolitan Achievement Test (MAT) showed significant performance gains.

A longitudinal study of the program conducted in 1974 showed that the program produces the following long term results:

- 80% of the students qualified for enrollment in Algebra upon completing the eight week summer session.
- 92% of those participating in the program successfully completed Algebra with a high degree of success.
- 85% of the Pre-Algebra students took additional mathematics courses beyond Algebra.
- 15% of the students took four years of high school mathematics.
- Student attendance was significantly greater for Pre-Algebra students than for other math students, indicating a more positive attitude toward math and school.
- Of the 1968 Pre-Algebra students (who graduated in 1972), 76% enrolled in college or vocational school.
- Of the 1969 Pre-Algebra students (who graduated in 1973), 90% enrolled in college or vocational school.

REPLICATION

School districts meeting the following criteria should consider adopting a Pre-Algebra Program: (1) Having a student population that includes at least one class of graduating eighth graders unprepared for regular high school algebra; (2) Wanting to use the Pre-Algebra techniques and concepts to build sound understanding for basic mathematics concepts in junior high school students; (3) Offering remedial mathematics classes at the high school level.

Materials: No special facilities or equipment are needed. Necessary materials are provided by the Pre-Algebra Development Centers. These include:

1. Pre-Algebra Text material - 5 units each costing $1
   - Unit Pack 1: Ratios and Proportions
   - Unit Pack 2: Fractions
   - Unit Pack 3: Decimals
   - Unit Pack 4: Percent
   - Unit Pack 5: Metric Measures
2. Individual diagnosis and remediation materials
3. Evaluation instruments
4. Mathematics laboratory manipulatives including:
   - Metric geoboards
   - Abacus
   - Decimal place board
   - Pegs and pegboards
   - Cuisinaire rods
   - Pattern blocks
   - Tangram puzzles
   - Dienes blocks (base 10 only)
   - Trundle wheels
   - Metric tape measure
   - One- and two-hand balances
   - Unit cubes
   - SRA Computational Skills Kit
   - Liquid capacity measures
   - Dial-a-matic adding machine
5. Several classroom materials, both teacher made and commercially produced.

Training: On-site visitations are available. A five-day intensive training program is provided at a Pre-Algebra Development Center project during the 8-week summer session. Training includes every phase of the LCD Technique, use of Lab and curriculum materials, diagnostic-prescriptive methods, and coordination of the elements of the program. The project offers such services as on-site assistance in developing and monitoring prototypes, and designing an appropriate Pre-Algebra laboratory. Further provisions are made for training math teachers in the LCD Technique so they can incorporate various aspects of the program into their regular seventh and eighth grade or remedial high school mathematics classes. Teachers training in the program can become turnkey trainers in their own district.

COSTS

Of implementation: Adoption costs depend on the number of students to be taught, the number of teachers to be trained, and the number of attendance centers involved. Text materials: $4 per student. Laboratory materials: approximately $1,000 (may be used by up to 500 students, with staggered schedules).

Of maintenance: After the first year, consumable materials would have to be replaced and teacher salaries would have to be budgeted for the 8-week summer session.

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Basic Skills
—Reading
—Math
Career Education
Grades 7-9

PROJECT R—3: READINESS, RELEVANCY AND REINFORCEMENT

Herbert Hoover Junior High School
San Jose, California

OVERVIEW, DEVELOPMENT AND RATIONALE

Project R-3 is a motivational basic-skill program that interrelates reading and mathematics through gaming simulation activities involving career awareness. Its title reflects its rationale: to make students *ready* to learn by motivation, to make learning *relevant,* and to *reinforce* positive attitudes and behavior. Developed in 1967 through the joint efforts of the San Jose Unified School District, the Education Division of Lockheed Missiles and Space Company, and consultants from San Jose State University, the program is designed to raise reading and mathematics skills of under-achieving junior high school students. The basic concepts are motivational activities to provide curriculum relevance; intensive involvements to improve teacher-student rapport; reading and math tailored to individual needs; parental involvement in school activities; and an inservice training program for staff development.

The project uses the diagnostic/prescriptive individualized approach in reading and math. Reinforcement of skill areas is provided through gaming-simulation activities that involve team learning, the decision-making process, and developing career awareness.

Students meet each morning for three, 50 minute periods devoted to reading, math, and a special R-3 activity designed to show the relationships of classroom instruction to the solution of real world problems. Each R-3 unit is designed around a core subject related to a cluster of occupations. These units usually operate two weeks, and fourteen such units make up the entire program. Two of the segments, each a week long and known as high intensity involvement periods, are highly structured field trips to locations distant from the school. The classrooms are learning labs, staffed by one teacher and one aide for up to 22 heterogeneously grouped students. During the three daily project class periods, students may work along, in small groups, or as a unit. R-3 instructional techniques include student learning contracts, diagnostic-prescriptive teaching, peer tutoring, simulations, and gaming. Materials used are selected to accommodate individual differences in ability and learning style.

Student performance is diagnosed by the Comprehensive Test of Basic Skills, the Gates-MacGinitie Reading Test, and the Spache Diagnostic Reading Scales. A profile for each student is developed in the first two weeks of the program and updated periodically. In

reading, skills are clustered in the areas of comprehension, study skills, vocabulary, and reading habits. Math skills are also clustered in areas of performance objectives. In both reading and mathematics, learning contracts are developed, teaching machines are used and peer tutoring encouraged.

Successful with underachieving eighth graders during the first year of operation, the project in its second year was expanded to a ninth grade curriculum that included motivational games and simulations. Since the Spring of 1970, the R-3 strategy has been to introduce the curriculum with seventh graders and to continue the program with the same students through the eighth and ninth grades.

Validated in 1973, the program was approved for national dissemination in 1974 by the Joint Dissemination Review Panel of the U.S. Office of Education and is packaged by the U.S. Office of Education as a Program Information Package (PIP). Now in its eleventh year of operation it has been replicated in many school districts across the country.

ESSENTIAL ELEMENTS

- Individualized instruction in math and reading as inter-related curricula
- Heterogeneous grouping
- Use of gaming-simulation activities related to career awareness and real world problems
- Stress on readiness, relevance and reinforcement
- Use of a laboratory-type classroom environment adaptable to a variety of activities using a multi-media approach
- Accurate monitoring and record-keeping, with profile sheets maintained for each student
- Parental and family involvement

GOALS AND RESULTS

The overall goal was to improve student performance in reading and math. Specific goals were:

In math:

- Students will improve in math skills at the rate of 1.5 years for every year in the project.
- Students will improve in math comprehension through practical and simulated experiences in relating mathematical concepts and skills to the real world.

In reading:

- Students will improve oral communication skills to facilitate reading.

Pilot pre-posttest achievement gains were compared to national norms and to control groups. Tests used were the California Test of Basic Skills and the California Achievement Test. Attitudinal changes were inferred from data on attendance, referrals, and disciplinary action. The program was successful in improving reading and mathematics achievement scores and in producing positive attitude changes toward school. Each year, the gains made by the R-3 students were significantly greater than those of control groups and greater than norm growth rates. Participants in the mathematics component (1976-77) made 2.4 months' gain for every month of instruction; and in the reading component, 1.8 months' gain for every month of instruction.

REPLICATION

Materials: Commercial curriculum materials are used for instruction, sequenced to staff-selected learning events. The materials designed and disseminated by Project R-3 for training and implementation comprise the following:

Manuals one through seventeen, listed below, are Career Simulations which contain a summary of each activity, statements of basic skill learning objectives, supplies needed, teacher copies and student copies ($3.00 each):

1. Career Preparation Unit
2. Personal Finance Unit
3. Electronic Data Processing Occupations
4. Marine Occupations
5. Environmental Occupations
6. Public Utility Occupations
7. Community Planning Occupations
8. Manufacturing Occupations
9. Marketing Occupations
10. Business and Office Occupations
11. Recreation Occupations
12. Scientific Occupations
13. Public Safety Occupations
14. Communication Occupations
15. Agricultural Occupations
16. Transporation Occupations
17. Personal Service Occupations
18. Annotated Index (Complete summation of all simulations by career area) $1.00
19. Mathematics Component (Math philosophy, objectives, tests, sample records, drills, activities and sample contacts)
20. Flowcharting (Introduction to logical thinking through use of flowcharting activities)
21. Model Instructional Unit (Reading/Math objectives correlated with simulation activities)
22. Administrative Guide & Instructional Management Package (Guide for Implementation)
23. Reading Component (Outline of Reading process, behavioral objectives, materials keyed to levels and objectives plus sample contracts)
24. Brochures (Project background, description, implementation information, and contact persons)

These training materials are part of the Project Information Package (PIP) developed by the U.S.O.E. for national diffusion to adopting districts.

Each project teacher requires an individual classroom to accommodate learning centers, activities, and re-arrangement of space for student groups.

Training: Some inservice training is necessary to master the R-3 activity component. Reading and mathematics teachers should have a knowledge of the diagnostic/prescriptive

approach to individualized instruction. Teachers must be receptive to team planning. All staff should develop expertise in gaming/simulation. Approximately 50 hours of inservice work are accomplished by each staff member in a given year. Training is conducted at the project site free of charge. Visitors are welcome by appointment.

COSTS

Of implementation: Based upon nine classrooms servicing 264-300 students, first year costs are estimated at $11,235 for materials and equipment and $10,000 for field trips and parent involvement. Start up costs recur for six new classrooms per year for the second and third years. The basic materials of a secondary level reading program can be used.

Of maintenance: Annual costs for nine classrooms are estimated at about $17,000 per year for materials and equipment, field trips, and parent involvement.

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READING IMPROVEMENT PROGRAM
SECONDAY SCHOOLS READING LABORATORY

Wood County, Parkersburg, West Virgina

OVERVIEW, DEVELOPMENT AND RATIONALE

The Secondary Reading Laboratory Program is an intensive, individualized diagnostic-prescriptive reading skills program for secondary students (grades 7-12) who are one year or more below grade level in reading. Developed under Title I funding, it was originally devised to help the region's secondary students who were disadvantaged economically or educationally. In August 1974, reading labs were established in five eligible junior high schools, two senior highs, and one parochial junior-senior high school, by the reading consultant and county reading supervisor.

Students are selected for the Secondary Reading Laboratories (SRL) based on standardized test results and classroom teacher recommendation. Each lab is staffed with a teacher and an aide, who work with 60 students daily in groups of 12, for 50-minute sessions. Each student's reading deficiency is diagnosed, and a reading skill-improvement program is developed for remediation of the deficiency. Skill areas covered include visual and auditory perception, vocabulary, word attack, comprehension, and word study skills. The management system devised for the operation of each laboratory gives the students independence and responsibility. Approximately 90% of each student's laboratory experience is used for individualized instruction, with the remaining time used for group instruction or related activities, at the teacher's discretion.

A wide array of materials and equipment is available in the reading lab. Based on daily monitoring of progress, the SRL teacher determines which materials and equipment are most appropriate for each student. These include reading series, tapes, records, films and filmstrips, and many high-interest low-vocabulary books. Student progress is monitored continuously by a variety of evaluative instruments built into many of the instructional materials, and by periodic diagnostic testing.

The program was approved for national dissemination in July, 1976 by the Joint Dissemination Review Panel of the U.S. Office of Education. It still serves the economically and educationally disadvantaged secondary students in the eight schools in which the Reading Labs were initially developed.

ESSENTIAL ELEMENTS

- Identification of students one year or more below grade level in reading.
- Establishment of a Reading Lab staffed by one teacher and one aide, containing wide variety of high-interest, low-vocabulary material.
- Individualized diagnostic-prescription instruction for student motivation through success orientation.
- Constant monitoring and record keeping.

GOALS AND RESULTS

The overall goal is to remedy student reading deficiencies and raise mastery of reading skills to expected grade level. During each project year, 1975 and 1976, the Stanford Reading Achievement Test was administered on a pre-posttest basis to all students in the program, including approximately 300 seventh grade students in five junior high schools, 120 tenth grade students in two high schools, and 23 students in the parochial junior-senior high school. Statistical analyses of the SRAT scores for each project year indicate that the SRL students made significant gains. In addition, preliminary comparisons of the SRL students' scores with those of control groups (comprised of students from two non-program junior high schools and one non-program senior high school) indicate that although the SRL students had lower pretest means on the SRAT, they generally averaged greater gains than the control group students and in most cases surpassed the non-program students' posttest scores. Furthermore, during 1975 an average of 73-80 percent of the SRL students attained or surpassed the program objectives while only 42-64 percent of the control students attained comparable levels of success. Differences in the percentages of SRL and control students attaining or surpassing the program objectives were maintained during the 1976 project year as well.

REPLICATION

Materials: These include a variety of reading series and audio-visuals. SRL is intended to be flexible; choice of specific materials is left to the discretion of the reading specialists and administrators at the implementing schools. Adopters of the program have found that availability of a wide selection of materials is vital to the program's success.

Specific equipment needed may vary from school to school. Existing SRL programs have used extensive audio-visual equipment including tape recorders, phonographs, reading consoles, sight and sound filmstrip viewers and overhead projectors. No special facilities or staff are required. A packet containing pertinent information on program planning, implementation, and the basic components for developing a Secondary Reading Laboratory is available on request.

Training: Staff training in diagnostic-prescriptive approaches is recommended prior to implementation. Teachers and aides should also have inservice training throughout the year. Training is conducted at either the project or adopter site, with costs borne by the adopting district. No special network funding supports the project's dissemination efforts. Visitors are welcome anytime.

COSTS

Of implementation: The initial equipment and materials costs for establishing a new lab come to approximately $6,000. Per student cost for staffing and materials is about $374.

Of maintenance: These relate primarily to staff salaries with a minimal amount for the servicing of equipment and the purchase of further equipment and materials.

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Basic Skills
--Reading
Grades 4-8,
(9-11 Remedial)

PROJECT READ-WRITE

Newark, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

Project Read – Write is a diagnostic-prescriptive reading program using innovative writing and speaking strategies to teach reading skills in grades 4-8. Designed to reverse the trend of declining rate of growth in reading, its primary goal is to enable students to read at or above expected levels. Students in the intermediate grade-levels often fall further behind national reading norms as their everyday classroom demands increase. Unless a system of diagnosis and prescription is applied, from grade 4 upwards, in all categories of reading comprehension, the complex requirements of high school English and subject-matter curriculums cause frustration and failure.

Project Read-Write is applied within the everyday classroom, by the regular teacher, employing only those reading materials already in classroom use. It involves every child, addressing the full range of reading needs from phonics and structural analysis to inferential comprehension, using not only the Language Arts or English periods, but also the content-area periods during the day for reinforcement. It can be carried out as a developmental, corrective, or remedial program, or as a full system of diagnosis, prescription, and ongoing evaluation.

The project is built around a "basic communication spiral" which links the various Language Arts to motivate the reading process and make it meaningful for the youngster. The spiral begins with the careful previewing of each reading selection which is then read by the class and discussed to ensure that it has been fully understood on the literal level. The prescriptions of Project Read-Write are then applied, to deepen the children's personal involvement in what they have read, and their understanding of what it means.

The prescriptions are the most critical elements in the program. They are structured writing or oral activities which motivate the student: to express opinions, make comparisons, come to conclusions; to identify and reflect upon the significant features of a reading; or to carry out a parallel activity in free composition periods. Each of the 200 prescriptions designed by the project staff is geared towards a main reading objective and several ancillary objectives which represent a common core of over 75 broadly accepted items ranging over the whole reading-skills spectrum and relate to existing reading program, including basal programs. The prescriptions can be utilized on an individual, small group, or total class basis; they can be used separately or in sequential clusters; and can be applied readily in language arts lessons and in content areas as will. To be effective, however, they

must be applied consistently. Each step in the prescription is specific, clear, and easy for the child to understand. At each step, the emphasis is on the child's own perceptions and feelings, rather than on rigidly pre-determined right-or-wrong responses.

The teacher selects the prescriptions which her class will require, after she has diagnosed the needs of her students; has summarized and prioritized them; and has then worked out a sequence administering the prescriptions, meeting high-priority needs first. The filled-in prescriptions are read aloud and discussed by the class, at the third stage of the communication spiral. The discussion enables: teacher and students to obtain consensus about the basic content and structure of the selection itself; and the teacher to build connections between the completed reading and the selection which the children should read next. The spiral, then, sustains a stream of motivation from reading to reading.

At the heart of the prescriptions is a series of language-manipulation techniques derived from a nationally validated Title IV-C Composition program. *Individualized Language Arts of Weehawken, N.J.* Applied by the children in rewriting the prescriptions, they strengthen youngsters' sentence-sense; reinforce both oral and reading vocabularies through writing activities; help children to frame phonics or structural-analysis generalizations inductively; and isolate main ideas, important details, and chronological and logical relationships within each reading selection. Most importantly, they compel every child to deal with the reading selection as a whole, instead of in isolated parts, and to involve in it his individual experiences, feelings, ideas and language resources through which he expresses them. It is that deep personal involvement which, psycholinguistically speaking, promotes full comprehension, since the child himself furnishes the major resources.

Developed in an inner-city environment. Project READ-WRITE was validated in 1976 and is preparing application for national dissemination approval by the Joint Dissemenation Review Panel.

ESSENTIAL ELEMENTS OF THE PROGRAM

- Use of checklist of commonly accepted reading skills or objectives for the intermediate grades.
- Use of diagnostic tests (preferably criterion-referenced) to ascertain and prioritize the classwide, group, and individual reading needs of their students.
- Application of the prescriptions which they have selected from the project's Teachers Resource Manual to address these reading needs on a priority basis.
- Maintenance of records of students' individual progress in meeting these needs throughout the school year, and use of additional prescriptions as the prioritized reading needs are met.
- Reinforcement of the entire program by using the prescriptions not only in Reading and Language Arts activities, but also in other content-areas employing reading, writing, or oral discussion activities.

The program requires a minimum of one Reading period per day, but teachers are advised to extend it into Language Arts and the content-areas during the rest of each day.

GOALS AND RESULTS

Goal: Students in the program (especially in grades 4-8) will show an average gain in aggregate reading of 8 months on the reading batteries of the Metropolitan Achievement Test for one year of instruction.

Comparisons were made of the median aggregate reading scores attained by 227 Project students in May 1975 and May 1976, respectively, on the Metropolitan Reading Test administered citywide annually with specific reference to the following subjects: Word Knowledge, Reading Comprehension and Total Reading. The results showed an average gain of 8.4 months for the students in grades 4-8. The gains for grade 6 (1.3 years) and grade 8 (1.0 years) were especially high. The data indicate that the project is making a positive impact on reversing the tendency of children in many school districts to reach a plateau, or even to lose ground, in the intermediate grades.

REPLICATION

Project Read-Write is funded by ESEA Title IV-C as a demonstration site. One day each week has been assigned for visitors to the Hawkins Street School, the Hawkins Street Annex, or Saint Rocco School to receive orientation in the program, view project materials, and observe the project in classrooms. Members of the project staff are available to give on-site orientation presentations upon requests from interested districts.

Materials: The only material needed is the Teacher's Resource Manual. No special facilities or equipment are needed. The following materials are available free of charge or at cost:

Overview Brochure	Free
Teachers Resource Manual contains full description of how program can be applied, entire body of prescriptions and techniques applicable to all content areas, samples of special lesson plans, informal reading and interest inventories, Reading checklist, and related bibliographies. The prescriptions apply divergent and convergent thinking, study skills and skimming techniques.	$10.00
Brochure on program management and support, for liaison persons	$1.00 per copy
Orientation film-strip	Price to be determined
Training film-strip	Price to be determined

Training: Inservice training is essential for proper implementation. The project team conducts a 3-day training workshop either within the adopting district or at some mutually agreeable location. The workshop provides an overview of the program, practice in basic techniques, taped demonstration lessons and the Resource Manual. Emphasis is placed on

the curriculum structure and prescriptions involved in the program, and their applications within the adopter school. Consultation services are also provided during the initial implementation year. Training and follow-up services are free of charge. One person in each adopting school is trained to act as coordinator, to become a turnkey trainer for the district in subsequent years, as the project is extended to other classes, grades, or schools.

COSTS

Of implementation: These relate to staff training, and the Teacher's Resource Manual, $10.00 per copy. Provision must be made for continuing staff supervision and support within the regular Reading and Language Arts program of the consumer school.

Of maintenance: None after the first year.

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RIGHT TO READ

Woodrow Wilson Junior High School
San Diego, California

OVERVIEW, DEVELOPMENT AND RATIONALE

This program is part of a national effort to eliminate illiteracy and "turn kids on to learning" by training teachers. It requires that users do a needs assessment to discover precisely what is needed; that planning be based upon the needs assessment results; that implementation of the plan involve professional development so that teachers can work together to bring about change; and that community volunteers be used. Its initial goal was to reverse the school's steadily declining reading achievement scores. The school (grades 7-9) draws from an urban area, is ethnically balanced, and comprises a low socio-economic, transient population.

The major thrust of the program is to encourage teachers to teach reading as it relates to their particular content area. Since secondary teachers are rarely trained to teach reading, inservice training is an important program component. Teachers receive special instruction in using diagnostic tests; are introduced to a variety of techniques for teaching reading skills; practice using instructional materials; and receive continuous assistance from department resource teachers. The emphasis is on staff development – taking the good teachers and making them better. Students whose reading skills are particularly low attend special centers where they receive intensive individual attention.

The teachers determine classroom activities, choose or develop curriculum materials that fit their own teaching style and develop an individualized program for each child. Student progress is constantly assessed by criterion referenced tests, instructor observation and informal conferences, with records kept for each student on reading growth. Commercially prepared post tests are administered at year's end to assess not only individual student's progress, but the efficacy of the whole program. The teachers are assisted in class by adult volunteer aides, paid teaching assistants, college interns, and student tutors, all of whom have received special training.

Following extensive planning and surveys of faculty, students and community, the program was implemented in the fall of 1972 for seventh grade students, in their English and Social Studies classes; and by 1974 it encompassed all three grades in all subject areas. It is still growing through continuous inservice training and ongoing assessment of community, student and teacher needs. Nationally validated, it received the approval and funding of the Joint Dissemination Review Panel of the U.S. Office of Education for national dissemination in March, 1974. It has been cited by the National Right to Read Effort as one of 12 exemplary reading programs.

ESSENTIAL ELEMENTS

- Training of teachers in methods of teaching reading in the content area.
- Individualized instruction with diagnosis and prescription.
- Continual assessment and recording of each student's growth.
- Use of cross-age tutoring, community volunteers and teacher aides.
- Use of Reading Center and Tutor Training Center.
- Pre-implementation needs assessment and planning.
- Teacher sharing and cooperation.
- Parent and community involvement.

GOALS AND RESULTS

The overall goal was to reverse the steadily declining reading achievement scores of the students. Specific objectives included:

- Improve reading comprehension and speed for all students
- Expand skills in oral communications
- Stimulate student and community interest in reading for information and pleasure
- Increase the English proficiency of non-English speaking students and those for whom English is a second language
- Train and use student tutors
- Involve parent and community volunteers more closely
- Work for more substantive and individualized teacher inservice

Evaluation data (CTBS) show that in the 6-month period between pre- and post-testing, the average growth in vocabulary was 11 months, or 1.8 months' growth for each month of instruction. In comprehension, the average growth was 18 months, or 3.0 months' growth for each month of instruction. The total reading score indicated that the average growth was 14 months, or 2.3 months' for each month of instruction. These gains reflect a significant amount of growth and brought the group from several months below grade level at the beginning of the year up to, or slightly above, grade level at the end of the year.

REPLICATION

Materials: The project staff believes that equipment and materials do not make successful programs, but people do and suggests that schools contemplating the purchase of materials first determine the particular needs of their own student body and staff. They have used the *Right to Read Assessment and Planning Handbook* (available from the State Right to Read Director), state-adopted and other commercially-prepared materials covering a range of reading abilities and student interests. Their own management system, with criterion referenced objectives and teacher-developed tests, provides the basis for their diagnostic/prescriptive approach. Commercially prepared diagnostic tests include the *Nelson Silent Reading Test* and *Comprehensive Test of Basic Skills.*

Project developed materials available include the following:

- Management Handbook ($1.00)
- Instructional Handbook ($1.00)

  Guide books to organization and use of the program

- Content Area Teaching Packet ($2.00)
  Suggestions for ways to utilize content area teaching
- Community Involvement Packet ($2.00)
  Suggestions for ways to involve the community in a volunteer program
- Cross-Age Tutor Packet ($2.00)
  How to set up a cross-age tutor program
- Diagnostic Prescriptive Packet ($2.00)
  Wilson's own Diagnostic Prescriptive Test for use in the Reading and Skills Center
- Right to Write ($2.00)
  Writing ideas to be used in the classroom
- Dictionary Skills ($1.00)
  Collection of ideas for using the dictionary in the classroom
- English as a Second Language ($1.00)
  How to set up and utilize English as a second language
- The Spelling Detective ($1.00)
  Worksheets to improve spelling
- A Writer's Workshop ($1.00)
  A compact writing assignment

Also avaliable is a filmstrip-cassette overview of the program.

Brochures available free of charge include:

- How to Judge a Reading Program
- Reading as a Basis for Curriculum Planning
- Literacy: A Must for All
- What Can Right to Read Do For Us?
- Woodrow Wilson's 14 Points in Right to Read
- Wilson Media Center
- Continuous Progress in Reading Instruction
- What Communities Can Do To Improve Reading Programs

Two rooms are required for the Reading Center and Tutor Training Center. General multi-purpose machines are used (recorders and cassette players).

Training: Inservice training is essential since secondary teachers, volunteer aides and student tutors are rarely trained to teach reading. This comprises, for the professional staff:

1. Workshops before the school year starts
2. Inservice training sessions throughout the school year
3. Assistance from content area resource teachers
4. Visits to other teachers' classes in home schools or other schools
5. Attendance at local reading workshops and conferences

Student tutors, who receive English credit for tutoring, are given 15 hours of inservice training; and volunteer aides are provided a 6-week inservice training workshop. Training for adopting districts is conducted at the project or adopter site. Visitors are welcome by appointment.

COSTS

Of implementation: Costs vary depending upon the number of grade levels and students to be served, salaries paid to certified staff and teacher assistants, and available materials,

equipment, and facilities. School districts can develop an effective reading program within reasonable budget constraints by using available resources to satisfy high priority needs identified during their project's needs assessment phase.

Of maintenance: Annual costs are determined by ongoing needs assessments and student use of consumable materials.

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PROJECT S•A•I•L — MATHEMATICS
Student Achievement in Individualized Learning

Wharton, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

Project SAIL-Mathematics is an eclectic diagnostic-prescriptive mathematics program designed to improve the math achievement levels of middle school students (grades 5-8) with a range of topics from whole number place value to pre-Algebra skills and concepts. The program can be used for remediation in grades 9-11.

A sequence of 25 mathematical topics is used to establish broad learning goals for students, while specific learning objectives for each student are determined by diagnostic test. Students then receive individual prescriptions based upon their learning needs. A variety of materials and techniques is used in the prescriptions to provide students with many avenues for success: student-teacher conferences, student-student tutoring, large group instruction, small group activities, games, textbooks, mini-texts, workbooks, movies, worksheets, cassette tapes, filmstrips, activity cards, learning kits, and special projects.

The mathematics teachers continually monitor student progress via achievement tests (after each unit of study), student record sheets, homework assignments, quizzes, and in-class interaction with students.

The project is designed to give educators a clear model for establishing a diagnostic/prescriptive mathematics program with a high degree of organization and a low cost factor. Schools may implement the entire program with their present textbooks and other educational materials.

Developed independently by the Wharton Public Schools without state or federal funds, the program received a one-year validation-research grant in 1974 and was validated in 1975.

ESSENTIAL ELEMENTS

- Skills and concepts hierarchy
- General diagnostic testing to place students initially
- Use of school's present instructional materials and/or project materials
- Student record sheets and record keeping system

- Use of pre-tests and achievement tests for each topic
- Use of large and small group instruction; student-student tutoring; and teacher-student tutoring
- Review quizzes to check retention levels
- Strong positive reinforcement and monitoring techniques and instruments to encourage maximum student achievement and parental contact.

GOALS AND RESULTS

The goal of Project SAIL was to demonstrate that a diagnostic/prescriptive mathematics program could improve student achievement in mathematics to a greater degree than the more traditional modes of instruction not characterized by individual diagnosis and prescription.

Scores of students after two years in the program were evaluated using the analysis of covariance procedure with pre- and post-test data. IQ scores served as an additional covariant. Data consisted of scores on the California Achievement Test. Kuder Richardson reliability coefficients for the test as a whole, as well as its subtests, ranged in the 90's. The content validity of the test was checked by comparing test items with program objectives. Over 90% of the test items were included in program objectives.

The consistency of the results over a three year period and the significance of the gains when compared to a control group provide evidence that the program is responsible for the improvements. The program allows all students to progress at their own rate. As a result, not only does the class as a whole score several months higher than expected by the end of the seventh grade, but individual students are able to achieve gains of several years. Thus, the program offers substantial growth potential to students at various achievement levels. Its dissemination is based upon the success for students in a suburban environment and its high level of exportability due to low costs and the utilization of educational materials existing in the adoptor district.

REPLICATION

Materials: The following project materials may be purchased:

Teacher's Guide Manual – for program implementation	$ 3.60
Pre & Achievement Tests Manual (with master record keeping forms)	7.00
Tests Key	2.10
Project SAIL filmstrip/cassette (In-service)	17.50
Filmstrip/cassette (Metrics)	25.00
Learning Booklets for 15 topics including: place value, addition, subtraction, rounding, multiplication, division, basic geometry, measurement, fractional addition and subtraction, fractional multiplication and division, decimals, integers, percent, sets, and metrics	.75 each
Descriptive brochure – free of charge	

Training: Visitation arrangements must be made in advance. A flexible two to five-day training program with follow-up consultation is available free of charge to school districts that sign a commitment to replicate the program's essential elements. Consumer districts are requested to register one administrator with the teachers selected for training.

COSTS

Of implementation: The project was originally supported by the Wharton Board of Education without expense above normal program costs. Start up costs are approximately $3.43 per student for a classroom of 25 students. This figure includes a file cabinet, 3 project manuals, and reproduction costs of pre- and post-tests. Districts are encouraged to make use of current materials in addition to recommended new materials purchased with normally allocated district funds.

Of maintenance: About $0.25 per student per year. Aides are helpful but not necessary.

CONTACT PERSON

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Project SAIL
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SECONDARY STUDY SKILLS PROGRAM

Cherry Hill, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

The Cherry Hill Secondary Skills course is a process oriented program in basic skills pursuits essential to the academic success of secondary students, especially in grades 7 through 10. The course is designed to increase competency in nine basic skills areas through cumulative, sequential development: listening, finding main ideas, drawing conclusions, taking notes, taking tests, surveying textbook material, using parts of textbooks, locating specific information, and following directions. The program presently comprises three courses, each lasting for 25 sessions (5 weeks) and geared to a particular group of "A" "B" or "C" students, according to their abilities. Thus, not all 9 skills are taught in all courses. The format of the program is adaptable so that an adopting district can "custom-tailor" the individual skills units to fit its own needs by combining skill lessons from all tracks and adding new lessons. All classes can be scheduled for the beginning of the school year or held throughout the year, and the course may be graded or nongraded (pass/fail).

In Cherry Hill Township, the course is successfully taught in two ways. In East High School, all 9th grade students have been required to take the course as part of the English curriculum since 1972. Initially team-taught by both the reading and English teachers, it is presently taught by English teachers only, with one of their members, the Project Director, serving as overall supervisor and coordinator. In West High School, a member of the reading staff selects students from English classes based upon performance on the course's pretests, and instructs them in small groups in the reading laboratory. Results gained in this method appear to be equally as successful as those achieved in East High School.

Whatever the ability track – advanced, average or below average – all students use the program's pre- and post-tests, certified as valid by correlation with the McGraw-Hill Basic Study Skills Test and by an inter-rater reliability study. Progress during the course is noted by many written exercises and quizzes, geared to the lessons taught. The pre- and post-tests also serve as excellent predicting devices for reading difficulties to the degree that the program has become the primary referral source for candidates for corrective reading instruction.

Motivation is a key element in the course. To counteract a negative attitude fostered by endless, repetitious drill work, the course is as academically easy as possible even within

the context of grading. In addition, skills are taught in highly unusual ways; e.g. the listening lessons involve a "listening obstacle course" on tape, designed to arouse even the indifferent student. In many lessons, small group, self-instructional exercises are featured and the unexpected becomes the rule, such as in "The World's Most Unfair Test" which introduces students to the complexities of taking tests.

The sequence of lessons in the program is important to its success. Taught first is *listening*, the foundation for most information derived in the classroom. Students must listen for something – main ideas. *Finding main ideas* relates to *drawing conclusions*. Using these three skills as a foundation, students learn to *take notes* under simulated lecture conditions as preparation for *taking tests*. Life-related skills abound in the "C" course: students use real bank statements, phone books, employment applications and new car stickers to *locate information*.

Begun as an elective within the reading department at East in 1971, the program was made mandatory in 1972 with an organized manual prepared the following year, and expansion effected thereafter by the district's local instructional council. Funded by a one year ESEA Title IV-C grant in 1975, the program was revised to its present form and achieved validation in 1976.

ESSENTIAL ELEMENTS

The program's replication is defined by the use of 25 prescribed units from one or more of the three tracks, A, B, or C, as a basis for sequential development of the 9 basic skills: listening; finding main ideas; drawing conclusions; taking notes; taking tests; using textbooks; surveying; following directions, and locating specific information. An overall supervisor or coordinator of the program is essential for successful implementation.

GOALS AND RESULTS

Goal: As a result of completing a 25 session study skills course featuring nine skills areas, students will perform at a significantly higher level than students who do not take the course, as measured by pre- and post-tests designed to test operative use of the skills. All students should show a minimal ten percent gain over pretest scores.

The thirty-six 9th grade English classes at East High were scheduled into six time periods of six classes each, with the first three time periods as experimental classes and the last three as control classes. Ability levels were carefully matched in number and type of classes: if there were 3 "A" classes, 2 "B" classes and 1 "C" class in Time Period 1 (experimental), the control group in Time Period 4 had the same composition.

Following a pre test for all students in both groups, the experimental groups received the course, while control classes continued in normal English classes. At the end of the course, both groups were post-tested and the results were compared. Two other testing procedures were used: an inter-rater reliability study was conducted whereby 60 pretests were selected at random and graded by seven teachers. Results were then compared for consistency. In addition, the Cherry Hill Interest Questionnaire was given to all students to determine their own rating for each of the sub-skills covered in the course, using a 1-to-10 rating scale for each activity in the course.

Results: The experimental groups scored significantly higher than the control groups in the use of the skills taught, with net gains (difference between experimental and control gains) as: A track, 12.3%; B track, 17.5%; and C track, 10.0%. The inter-rater reliability study showed a 90% level of consistency on the note-taking segments of the pre- and post-tests. The student questionnaires placed most value on the motivational aspects of the course. Overall favorability was evident in 65% of the responses. Listening, note-taking, test taking and (for C track) locating information rated very highly.

REPLICATION

Materials: All three strands are included in the following list:

1. **CLASSROOM KITS:** Each kit contains 30 student manuals and one each of the following: teacher manual, teacher/administrator guide, test/quiz ditto set, annotated bibliography, transparency masters book, locating information book (not used in B Track course), set of tapes. Three versions: Tracks A and B—$55 each, Track C—$57.
2. **TEACHER'S MANUAL:** A comprehensive guide to all lessons. Three versions: Track A—$8.25, Track B—$7.25, Track C—$9.00.
3. **STUDENT MANUALS:** Each includes all class and homework sheets used by students in a handy tear-out format. All tracks—$.50 each
4. **TEACHER/ADMINISTRATOR GUIDE:** Explains the rationale, purpose and scope of the program and gives detailed instructions for conducting a training workshop. ($1.10)
5. **TEST/QUIZ DITTO SETS:** Ditto masters of all tests and quizzes used in the program, each making 150-175 copies. Three versions: Track A—$8.50, Track B—$6.00, Track C—$6.75
6. **ANNOTATED BIBLIOGRAPHY:** A comprehensive guide to articles, studies and programs about study skills, including an extensive list of available materials. ($1.25)
7. **TRANSPARENCY MASTER BOOKS:** Provide all copy for transparencies used in the program, including editorial cartoons; added transparencies can be used as supplements. Paper copies; must be made into transparencies locally, but will reproduce clearly when run through such machines as 3M 411 or 45 copier. ($3.00)
8. LOCATING INFORMATION BOOKS: Copies of parts of the newspaper, advertisements, editorial cartoons, letters to the editor, etc. Used in group work lessons; can be laminated for durability. ($3.75)
9. **AUDIO TAPES:** Recorded on both sides and packaged in translucent boxes inside a cardboard box container. Three versions: Track A—$10.00, Track B—$15.00, Track C—$12.00
10. **PUBLICITY FILMSTRIP:** A 10-minute sound filmstrip contains all essential facts about the program; available for sale ($32.50) or for rent ($5.00 per week).

A technical brief and an overview brochure are available free of charge. No special equipment or facilities are needed over and above existing audio visual equipment. Office space should be available for the program supervisor. A file cabinet and movable desk for students working in groups are desirable.

Training: The project is funded for dissemination by ESEA, Title IV-C to offer presentations and training free of charge to New Jersey districts. At East High School, visitors can observe classes, speak to faculty and students, and examine materials. Visits must be arranged in advance with the Project Director. Districts commited to adoption are offered a three-stage training and consultation program. Three steps are required of all adopting districts: (1) needs assessment, as determined by a questionnaire; (2) a two to three day workshop to train the adopting district's staff; and (3) on-going and follow-up assessment and consultation.

COSTS

Of implementation and maintenance: Costs relate primarily to teacher training and purchase of materials. An overall supervisor or coordinator for the program is essential and may require a staff addition. No special environment or equipment is needed. With a 9th grade population of four hundred students, start-up costs range from $19 to $25 per student. Continuation costs are approximately $16 per student. Cherry Hill's costs on a continuing basis are below $10 per student. This is due to the district's own media and printing center. A complete breakdown of costs is given in the Administrator's Manual.

CONTACT PERSON

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Basic Skills
--Math
Grades K-12

STAMM: SYSTEMATIC TEACHING AND MEASURING MATHEMATICS

Jefferson County Schools
Lakewood, Colorado

OVERVIEW, DEVELOPMENT AND RATIONALE

The STAMM program was developed to improve students' scores on the Comprehensive Test of Basic Skills (CTBS). Its major thrust is to provide continuous progress in mathematics throughout the entire school experience of all students, kindergarten through senior high school. The process and products that form the STAMM program constitute a complete system that can be adopted or adapted by other districts. It comprises a framework of objectives; promotes well-defined processes of instruction and assessment through learning packets; and features careful monitoring of a student's progress, measurement of mathematics competencies, and the promotion of alternative courses at the high school level. The program may be used successfully in many different classroom situations including small group instruction, large group instruction, individual instruction, team teaching, math lab, etc. Resource material is provided for each objective; textbooks, manipulative materials, and teacher-made activities may be incorporated as well.

Since STAMM is based on continuous progress, it is important to keep complete records on each student and to test each student's progress frequently. This enables a teacher, in the fall, to continue a student from where he/she left off in the spring. A teacher with one grade level of students may need to be familiar with more than one level of the program to accommodate continuous progress.

In Jefferson County Schools, the project involves all students—80,000, employing diverse organizational patterns, teaching styles and facilities. Approximately 15% of the minimal instructional day is used for mathematics. The program does not require aides, but parents can become involved at levels K-2 by volunteering to help with the one-to-one testing that is used in criterion testing at those levels.

STAMM was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in 1976.

ESSENTIAL ELEMENTS

- Complete mathematics curriculum
- Sequencing of performance objectives

– Continuous progress system, with teacher resource packets for each objective
– Use of criterion testing for each objective and pre- and post-tests
– Use of a record-keeping system

GOALS AND RESULTS

The goal was to improve student's scores on the CTBS.

The STAMM program was implemented throughout the district during the 1972-73 academic year. The developers used two measures for evaluating the effectiveness of the program: 1) a nationally normed standardized test – *Comprehensive Test of Basic Skills (CTBS)*; 2) criterion-referenced tests – developed by the staff, which were based on the objectives of the STAMM program. The *CTBS* was administered to the sixth and eighth grades for three years prior to, and three years during, STAMM program implementation. Prior to the use of STAMM, the percentile rank of these two grades was between 45 and 50 percent. In the second and third years of implementation, the percentile rank of the sixth and eighth grades had risen to between 65 and 70 percent.

Between two-thirds and three-fourths of all Jefferson County students now score above the national norm on the Comprehensive Test of Basic Skills at grades 4, 6, and 8. This achievement has been consistent since 1973. Before implementation, roughly half the students scored above national norm.

REPLICATION

Materials: Program materials include: teacher-developed instructional resource packets for each objective, at all levels; criterion tests; pre and post-tests objectives; approved textbooks which have been totally cross-referenced with the objectives; student record cards; activities, games and numerous additional manipulatives. Resource packets, available for each level taught, offer teaching strategies and alternative approaches to subject matter. One level of packets is usually appropriate for every two teachers at a level. More than one level may be needed in a single classroom. Materials may be reproduced locally. An indepth minisampler containing an overview of the program is available on request. A completer sampler kit may be purchased which includes a cassette tape.

The following materials are available:

1. Sets for *Elementary and Junior High Levels* (Kindergarten–Grade 8) $8.00 each
   Each set contains the teacher manual and student materials per level (worksheets, placement tests, criterion tests, optional progress tests)
2. Sets for *Secondary Courses* (Grades 9-12) $20.00 each
   One resource packet can be used by one to three teachers. Nine resource packets are available:

College bound sequence
1. Algebra I
2. Geometry
3. Algebra II
4. Trigonometry

Non Sequenced Topics
1. Math Competencies
2. Easy Calculating Methods (Rapid Calculation)
3. Applied Math
4. Vocational Math (basic skills)
5. Vocational math units used for automechanics, electronics, service station attendant, home ownership and carpentry.

Guides for the secondary units are furnished without cost (one per unit); additional guides are available at $3.00 per guide.

3. *Sampler Kit* $5.00

Includes mini-sampler and accompanying cassette tape, complete lists of objectives (K-12), sample activities, sample tests, adoption and training procedures.

Textbooks may be used with the program. No special equipment or facilities are needed.

Training: Inservice training is necessary before implementation. Two-day training sessions are scheduled throughout the year at the project site. Training at the adoption site is possible within funding limitations. Continuing weekly or monthly meetings are recommended for the local staff.

COSTS

Of implementation: Start-up costs for the purchase and reproduction of all necessary materials are approximately $1.50 per student. One copy of all K-6 masterials costs $56.00; one copy of all K-8 materials $72.00; and one copy of K-12 materials, including sampler kit, costs $257.00. Additional copies may be necessary for adoption.

Of maintenance: Approximately $.70 per student per year, to duplicate instructional materials.

CONTACT PERSON

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Basic Skills
--Language Arts
--Math
Classroom Management
Grades 3-12

TEAMS – GAMES – TOURNAMENTS (TGT)

Baltimore, Maryland

OVERVIEW, DEVELOPMENT AND RATIONALE

TGT is an instructional classroom management system designed to foster greater student enthusiasm in learning basic skills through mutual cooperation in heterogeneous ability groupings, grades 3-12. Complementing regular instruction in upper elementary, junior and senior high school classes, it comprises three components: teams, games and tournaments.

- *Teams* are formed containing four or five members with heterogeneous grouping and equality across teams, for study and peer tutoring on worksheets
- Instructional *games* are played by individual group members against members of equal ability from other groups, to score points for their teams. The games require knowledge of the concepts or skills of a curriculum unit.
- *Tournaments* comprise weekly game-playing sessions in which each student competes with two other students of comparable academic ability from other teams. The individual game scores are converted into team scores and winning teams are declared. The tournament is a series of TGT games played at regular intervals.

TGT can be used with traditional lecture or drill methods, or individualized or performance based instruction and supplements the instructional approach already practiced by the classroom teacher. The curriculum units address mastery of specific language or math concepts and are designed for six to eight weeks' use in each class period, although shorter units may be completed in three to four weeks. TGT takes about half of the regular class time per week. The units help to improve basic skills, to promote positive pupil attitude toward schoolwork and classroom experiences, and to increase cooperation through peer-tutoring. Each unit contains: a behavioral objective that explains how the games can be applied to subject matter; game packets consisting of game cards, worksheets, and answer sheets; score sheets; and a Teacher's Guide. Pretest/posttest data are used to determine the academic effects of the instructional unit. Teacher observation also determines incidence of peer tutoring and student interaction.

Developed initially by the Center for Social Organization of Schools at Johns Hopkins University with funds from the National Institude of Education, it was the result of five

years of research based on the concepts of cooperation and competition in classrooms. Because all development was carried out through classroom experimentation, the participating teachers contributed heavily to the end result and the teacher's manual.

Since its initial field test in 1973, TGT has found acceptance in over 300 schools in 20 different states. It was approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in 1975, and bases have been established in eight states to facilitate adoptions (New York, Maryland, North Carolina, Michigan, Kansas, Texas, Montana and California).

ESSENTIAL ELEMENTS

- Classroom management system with heterogeneous ability groupings
- Use of teams for peer tutoring on worksheets and study
- Use of curriculum units for 6-8 weeks (shorter units 3-4 weeks), for mastery of specific concepts
- Use of games for inter-team competition
- Use of weekly tournaments as motivational factors

GOALS AND RESULTS

The overall goal is to increase student mastery of basic skills in a heterogeneous setting. Specific objectives are:

(1) to improve student attitudes toward their classmates and toward the subject matter at hand
(2) to create student peer tutoring
(3) to stimulate students requiring them to cooperate with others on task-oriented teams
(4) to dissolve social barriers among students

Ten studies were conducted to assess TGT's impact on academic achievement, student attitudes toward school, extent of peer tutoring and mutual concern of students, and promotion of social fairness. The studies involved a total of 1,091 students, divided into experimental and control groups. TGT was implemented in math (seventh grade), social studies (seventh and tenth through twelfth grades), language arts (third grade), and reading (third grade). In all instances but one, (seventh grade social studies), project students showed signigicantly greater gains in academic achievement than did control groups. Measures of achievement included standardized achievement tests such as the Stanford Achievement Test and the Hoyum-Sanders Elementary English Test, as well as project-designed instruments.

In addition, recent analyses have shown very positive effects on classroom race-relations. They indicated that administering team rewards to heterogeneous groups of students helps reduce race and sex barriers which inhibit student interaction. Thus a more positive impact on students' attitudes was discerned from the team effect than from the use of instructional games.

REPLICATION

Materials:

- Language Arts Kit, grades 3-6 (21 games) $113.00
  Each game set of skill cards covers one of the skills identified as essential for developing concepts in Grades 3-6. Games are available in sentence structure, capitalization, punctuation, grammatical usage, and spelling.
- Analogies Kit, grades 3-6 (9 games) 49.00
  Each game uses different examples of six types of analogies: antonyms, synonyms, size, functional relations, part of the whole, and degree. Some examples of each are in every game. Items are in multiple choice format.
- Vocabulary Kit, grades 3-6 (13 games) 70.00
  The game cards are grouped by level of difficulty. The vocabulary includes words taught in Grades 3-6.
- Language Arts Kit, grades 7-9 (22 games) 119.00
  Skills covered include word class identification, noun usage, using verbs and modifiers, spelling, and punctuation.
- Mathematics Kit, grades 3-5 80.00
- Sample package of any subject including teachers manual, worksheet, game, etc. 6.95
- An overview 10 minute filmstrip is available on a free-loan basis

Training: Training is suggested to familiarize teachers with TGT. Individual teachers can implement TGT through use of teacher's manual and construction of own worksheets and games. For school or district implementation, there should be general awareness training, followed by workshop training (one-half day). If TGT's published curriculum materials are used, no teacher development of materials is required.

COSTS

Of implementation: These relate to the cost of the curriculum unit purchased and one half-day training for teachers.

Of maintenance: They vary according to individual teacher's use of the program materials.

CONTACT PERSON

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Materials are available from the distributor: Argus Communications, Inc., 7440 Natchez Avenue, Niles, Illinois 60648

Basic Skills
–Reading
–Math
Alternative School
Grades 9-12

UPSTAIRS SCHOOL

Roosevelt High School
Portland, Oregon

OVERVIEW, DEVELOPMENT AND RATIONALE

The Upstairs School is an alternative school, "a school within a school" designed to take the student "from where he is" to grade level, so that he can succeed in the normal classroom. It grew out of a pilot project developed in the late 1960's, under Title I, at the Roosevelt High School to help disadvantaged students whose reading levels were only at grades 1-6. The present program attempts to demonstrate growth in reading comprehension and vocabulary with a minimum improvement expectation of .8 years growth in reading ability for one year of instruction; and to improve student self-concept and self-confidence.

Incoming ninth-grade classes at Roosevelt High School have consistently been among the "bottom" in reading skills in the Portland School District. Over one-third of the student body is two or more years below its chronological grade level. These students are placed in special classes for individualized instruction emphasizing reading rather than English and Social Studies. Classroom teaching for this special program includes an open space classroom divided into five teaching stations plus a central lounge area for individualized-interest reading. All students in the program use this classroom for one 50-minute period each day. During that period, students receive sound training in spelling, penmanship, creative writing, dictation, vocabulary expansion, timed reading for better comprehension, and reading aloud. A student must master each skill before proceeding to a higher level. Students enter/leave/return depending upon individual need. They are then programmed into either regular or special classes as needed for the rest of the day. An atmosphere of work, trust, concern, and loving care for each student is unique to the program.

The *Reading Center* is staffed by a reading specialist, a Title I teacher, and five aides. The reading specialist is responsible for the overall design and operation of the program, and for the training, supervision and assignment of the staff. The Title I teacher provides direct instruction to students, and assists with training and supervising the aides. Aides provide supplementary reading instruction to small groups of students, and assist with preparing materials, record keeping, and contacting parents. Student aides are also used to provide tutorial assistance to students requiring additional help. The *Math Center* is staffed by a teacher and Title I aide.

A counselor coordinates students' activities in the Upstairs School with other classes, keeps other teachers informed of students' progress in the special programs, and relates the

Centers' resources to problems students may be having in regular classes. The program encourages parental involvement and contact is maintained with parents of program children. Parents of incoming ninth graders are informed about the special programs, and an orientation program emphasizes home motivation.

Students are selected for the program whose CTBS scores indicate achievement deficits in basic skills of two or more years. Progress is monitored by the CTBS given each spring and the Gates Mac Ginitie Reading Test used periodically during the year.

Since the inception of the program, remedial math, a remedial English Skills Lab, and remedial social studies have been added. These additions have created a highly-structured school within a school, and the "Upstairs School" is now an alternative school in every sense of the term. The Upstairs School is in its seventh year of operation, serving 250 students daily and approximately 375 students annually. It is funded by ESEA Title I and was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in May, 1973.

ESSENTIAL ELEMENTS

- Identification of students two or more years below grade level in basic skills
- Use of the "school within the school" structure (an alternative school) for specific periods adjusted to students' needs
- Use of a Reading Center – and open-space classroom divided into five teaching stations and central lounge
- Use of a Math Center
- Individualized motivational instruction with mastery learning
- Use of specific record-keeping system
- Staffing of Reading Center by reading specialist, teacher and five aides
- Mainstreaming of students when appropriate
- Constant liaison of special program teachers with other classroom teachers
- Parental involvement

GOALS AND RESULTS

Two overall goals prevail:

1. To improve student's reading and math skills to a level where they can succeed in the normal classroom, by effecting growth of .8 of a year in a nine month period.
2. To improve student self-concept and self-confidence.

More specifically, the goals for each student are: (1) to be able to sound out and blend words; (2) to improve spelling ability; (3) to increase reading comprehension; (4) to increase reading rate; (5) to improve writing skills; (6) to improve arithmetic skills; (7) to work independently; (8) to modify disruptive behavior patterns.

Student progress was determined through pre-posttest performance on the California Test of Basic Skills. In both the reading and language arts sections, project students made statistically significant gains, surpassing the goals set by the program.

REPLICATION

Materials: Special materials are not needed. Mastery Teaching method is successfully used with a variety of reading materials, including linguistic materials, basic reading series, magazines, and newspapers. All textbooks are phonetics-oriented. Special-interest books are low-vocabulary. In addition, many teacher-developed materials are used. No special staffing or facilities are required. The Upstairs School uses reading hardware such as language masters, tape recorders and stop watches. Descriptive brochures are available free of charge.

Training: Training is required. A single teacher or an entire district may adopt the program. For the district, inservice staff training should be an ongoing activity. The Upstairs School staff attends inservice sessions throughout the year. Fall workshops are also scheduled to train aides to use methods and materials effectively. Training may be conducted at either the project site of adopter site, with the adopting site covering all costs, since no special network funding supports the project's dissemination efforts. Visitors are welcome by appointment only.

COSTS

Of implementation: Start-up costs under Title I funding average $250 per student, inclusive of staff salaries and with the district providing the usual support services of space, maintenance, supplies, and supervision.

Of maintenance: Annual costs cover salaries for personnel, with small amounts for supplies and incidentals. Replacement of basic supplies, reading and math books, test materials, workbooks, and other consumables is determined by local program requirements.

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Career Education & Guidance

INTRODUCTION TO CAREER EDUCATION

The second to fifth programs in this section all relate to Experience-Based Career Education (EBCE). These were developed in response to a need for career education that would enable students to make rational choices about careers and life goals and use the community as the source of potential educational experiences. In 1971, the U.S. Office of Education contracted with four educational laboratories to design and develop Employer-Based Career Education programs: Appalachia Education Laboratory, Inc. (AEL) in Charleston, West Virginia; Far West Laboratory of Educational Research and Development in Berkeley, California; Northwest Regional Educational Laboratory in Portland, Oregon; and Research for Better Schools in Philadelphia, Pennsylvania. The projects were later transferred to the National Institute of Education and the name changed to Experience-Based Career Education.

All four EBCE model programs were validated as innovative, successful, cost-effective and replicable, according to the standards and guidelines of the U.S. Office of Education; and all four were approved simultaneously for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in May, 1975.

Dissemination of all four programs is supported by the National Institute of Education and the Office of Education's Vocational Education Act - Part D program.

Career Education
—Counseling
Grades 9-12

CAREER ANALYSIS AND PLANNING

Woodbridge, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

The Career Analysis and Planning Program is a service sponsored by the Woodbridge Township School District, to meet the career development needs of out-of-school youth and adults who are underemployed, unemployed or returning to the labor force. These individuals request and require: help in clarifying what skills they can offer to the world of work; information about what opportunities the world of work offers them; and help in building on their strengths to improve their career development. Some agencies in some communities deal with certain dimensions of these populations, but by and large, the overwhelming numbers of people in these categories have nowhere to turn.

The program is based upon a model of rational decision making which helps individuals clarify their expectations; gain insight into their potential; and make plans on how to go from where they are to where they would like to be. In addition, it helps individuals learn the skill of rational decision making so that they decrease their need for additional help when faced with the necessity of making changes in their career pattern in the future.

Four major components constitute the program: outreach, testing, counseling and referrals:

Outreach Program – The Outreach Program is composed of multiple techniques for making potential clients aware of the existence and benefits of the service. It includes the use of audio-visual packages, personal contact, presentation at group meetings, and use of all media and community linkages currently available in the community.

Testing – While some clients can be helped by simply answering requests for information, many others have never had an opportunity to assess objectively their own talents. The program offers a battery of tests, both paper and pencil and experiential, designed to meet this need. Major dimensions of this include the General Aptitude Test Battery and the Work Sampling Program of the Jewish Employment and Vocational Service, a job related simulation, offering the client an opportunity to experience over thirty different job related experiences. A trained observer is able to assess cognitive, psychomotor, and affective attributes of the client. This results in an extensive report that the client can use in making judgements concerning future career development plans.

Counseling – Regardless of the need for testing, an opportunity to talk to a trained counselor to interpret current reality and examine alternatives is extremely critical to the process. The unique dimension of the project's approach to counseling is its use of a career planning

outline which not only assists the client in establishing plans, but begins to teach a planning process that can be used by the client in the future.

Referrals – As a counseling agency, it is critical to have a set of agencies who offer particular educational, training or therapeutic services that may be needed by a particular client in order to achieve career development objectives.

Initiated as a response to district needs for career counseling for its high school students and dropouts, the program was developed over a three year period, 1972-1975, funded by an ESEA Title III grant. Validated in 1975, it now serves the three high schools in Woodbridge, supported completely by the Woodbridge Township Board of Education. Parts of the program have been adopted by other school districts.

ESSENTIAL ELEMENTS

Four major components (described above)

- Outreach program – for recruitment
- Testing – for aptitude assessment
- Counseling – in career planning and decision making
- Referral – to community and educational agencies and services

Constant community linkage is vital to the program.

GOALS AND RESULTS

1. To increase the development of appropriate career goals for clients as a result of program intervention.

   During the development of the project, over 1,400 clients were serviced. Based upon a sampling of 43% of the clients, over 75% of them indicated significant improvement in their career development plans.

2. To develop plans that are practical and implemented.

   A result of the follow-up study mentioned above indicated that over 83% of the clients had selected and implemented appropriate first steps toward achieving their career objectives.

REPLICATION

Materials: All are available free of charge.

Operational Manual – describes procedures for establishing and operating the program, and looks ahead to the long range future within the agency or district structure.

Slide-tape presentation – shows the process employed, from recruitment to referral. Available on loan.

Technical Brief – provides an overview of the program, from development to services offered.

Training: Visitation and training are available at the project site. The project provides training in the process and approach; the State Department of Labor provides training in the General Aptitude Test Battery.

COSTS

Of implementation: Start-up costs approximate $300-$400, and include the facilities, basic testing material and salaries of the counselor and clerk. The J.E.V.S. Work Sampling Program can be purchased for $7,000 including all necessary training in its implementation. The program can be expanded to include a work sampling evaluator as a para-professional and an Outreach community aide, if local conditions and budget warrant. A district can adopt the Woodbridge approach to planning using their own tests and the General Aptitude Test Battery provided free of charge by the State Department of Labor, without the expense of the J.E.V.S.

Of maintenance: Operational costs call for a minimal amount of office and testing supplies and salaries, readily absorbed.

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Career Education
Alternative School
Grades 11-12

EXPERIENCE-BASED CAREER EDUCATION (EBCE)

Appalachia Educational Laboratory

Charleston, West Virginia

OVERVIEW, DEVELOPMENT AND RATIONALE

The Experienced-Based Career Education (EBCE) program developed by the Appalachia Education Laboratory (AEL) is an alternative high school program that has been implemented by the school systems of 20 states. It allows students to explore various careers which interest them, by direct experience in the local community. By combining basic academic learning and skill training, using the community as a school, the program provides students with realistic and relevant learning opportunities enabling them to develop a consistent set of values and rational career decisions. It is designed not only for students who wish to explore career options experientially, but also for those who want minimal entry-level skills, and for the college-bound who want to test tentative career choices.

Participation in the EBCE program is a full-time activity elected in place of the traditional high school program. Through EBCE, students earn academic credits; explore the real dimensions of many careers; learn about who they are and what they want to become; and master some of the skills that they will need to negotiate successfully the complex world and adult living. Instead of attending traditional classes, students are placed within the community at participating experience sites (local business), spend four days a week onsite and one day at a central learning center for 3-4 weeks, depending upon objectives and activities, and have several on-site assignments during the year. No assignment lasts longer than 13 weeks. When all assignments have been successfully completed, and all academic credits accumulated, the student returns to the home high school. In the learning center, students receive special tutoring, participate in small group discussions, and complete independent study activities using resources of the home high school when necessary. Seniors receive a high school diploma and a career education certificate.

Upon entrance into the program, each student is assigned to a learning coordinator who guides, counsels and evaluates all aspects of his program of instruction. To ensure that students obtain academic credit, this EBCE model has reworked standard high school courses around 28 key concepts, 85 subconcepts and 500 general objectives, developed for five areas (math, social sciences, natural sciences, English/communications, and career education), – all organized into 28 courses, some traditional, others non traditional. Assisted by their learning coordinators, students select the concepts and objectives for credit and design relevant activities for completion at selected experience sites. Thus, academics are mastered in the context of the work situation. While *academic* requirements vary, all participants

must complete the same *career* education requirements. EBCE turns the community into the school by enlisting the aid of a community activity council, experience sites, community resource persons, and experience site analysts.

The EBCE model of the Appalachia Education Laboratory is a complete system which can be installed as a whole, or can be adapted in part to fulfill a school district's particular needs. Implementation requires two professionals unusual in a traditional school: a learning coordinator and an experience-site analyst. Created for Kanasoha County (Charleston), West Virginia, it developed as an alternative program wherein students could explore careers while pursuing academics in a non-classroom situation. From the initial thirty experience sites and twenty three students in 1972, the program has grown to over 100 sites and has trained over 400 high school students. It now operates in three of the local high schools as well as the Laboratory School, with plans calling for continued expansion. The model has been adopted throughout the nation. Dissemination of the program is supported by the National Institute of Education and U.S.O.E.'s Vocational Education Act Part D. School systems in forty two eligible states may apply for three-year grants to implement the whole EBCE program or specific components.

ESSENTIAL ELEMENTS

- An alternative school combining academic component with career component
- Use of the community as a school, to provide experience sites
- Use of a Central Learning Center apart from the traditional school
- Individualized program and instruction for each student
- Use of specific materials developed by project
- Use of specific concepts, objectives and courses, traditional and non-traditional
- Use of learning coordinators for individual program integration, and experience-site analysts for job placement
- Involvement of parents and business leaders
- Granting of high school diploma and a career education certificate

GOALS AND RESULTS

Overall goals relate to academic achievement (cognitive) and career awareness and values (affective). Specific goals are:

- To enable students, by direct experience in the local community, to learn the process of career decisionmaking.
- To allow students to study their academic work in a community context.
- To help students become more responsible and mature.
- To help students develop a set of values.

Student Attitude Survey, Comprehensive Tests of Basic Skills, Iowa Test of Educational Development Career Maturity Inventory, and JOBS (sex-roles stereotyping test) were administered pre/post to EBCE and comparison students during the last five years. Results favored EBCE students in cognitive and affective areas, with EBCE students showing significant growth in reading comprehension, language arts, math and science over the control students. Its positive impact is supported by parents, employers and EBCE graduates.

REPLICATION

The following procedure prevails: The adopter should visit project site; may either buy the program, write a joint proposal with AEL, or secure own funding. The staff, including learning coordinators and an experience-site analyst, is selected, and training undertaken. Program materials and documents to accommodate one learning coordinator to twenty students are obtained. The adopter then analyzes sites and recruits students for the start-up, a process requiring approximately three to four months lead time.

Materials: No special equipment or facilities are needed. The Appalachia Educational Laboratory has developed special program materials to implement the EBCE system, relating to personnel and to students:

EBCE Personnel Materials

Basic Procedures Manual: the basic reference tool, explains all processes and procedures used in EBCE's Instructional Delivery System. $4.00

Experience Site Analysis Manual: provides the individual responsible for community liaison with guidelines for organizing the community, analyzing and documenting learning potential at community experience sites, and organizing and working with a Community Advisory Council $2.90

Administrative Manual: provides guidelines and a complete Management by Objectives System for the project director. $3.45

Introductory Guide to Activity Sheet Preparation: offers tips and suggestions for developing activity sheets; includes sample activity sheets $0.75

Cross-Reference Catalogs: a set of five curriculum guides lists, by discipline, objectives, and related learning activities and resources, both in-house and in the community (for English, Math, Natural Science and Social Science) $12.25

Camera-Ready EBCE Consumable Forms: a booklet containing camera-ready copy of all forms used to operate an EBCE program with recommendations on quantities needed. $1.15

Log for Monitoring Resource Person (RP) Availability (Sample): EBCE method of controlling and monitoring student placement through ascertaining RP availability. $1.20

Evaluation Handbook: a guide to establishing and implementing an EBCE evaluation plan; deals with personnel, design, goals, data collection, data analysis, budget timelines, biographical evaluation, and report writing $3.50

Student Materials

Student Program Guide: a student-centered document to build and monitor a student's career and academic program throughout the year; contains the EBCE courses, concepts and objectives for the student's academic program, and four self-assessment instruments which access students to Worker Trait Group clusters and subsequent job titles of interest. . . $6.50

Student Career Guide (Complete): a student-centered document which allows a student to examine and record growth in four areas throughout the year: knowledge about self; about experience sites; about occupations; and about career decision-making and planning . . $6.03

Activity Sheet: a single-page learning model documenting a student's individualized, short-term project in terms of objectives, learning activities, performance criteria, and timelines, culminating in academic credit $1.65

Basic Skills Inventories: basic skills indices administered to all students to diagnose weaknesses which may require remediation in mathematics and reading..... $0.40

Experience Site Learning Guide (Sample): a booklet developed on each cooperating experience site describing the site in general, each Resource Person's (RP's) job specifically, and the levels of possible student involvement around which projects can be developed . . . $1.10

Training: Training is essential and is conducted at the EBCE learning center in Charleston, West Virginia. It comprises: an intensive five days for learning coordinators, including a practicum allowing trainees to work with students in simulated activities; training for experience site analysts; and a three-day training in techniques of community analysis and effective community liaison.

COSTS

Of implementation: These include: a feasibility study, learning coordinator and experience-site analyst training, technical assistance, travel and per diem for AEL technical assistance staff, and the EBCE curriculum materials. Installation costs vary with the scope and design of the adopter's program, numbers of students and staff, and assistance required. Estimate for thirty students and two learning coordinators: $5,000-7,000 minimum. Costs for materials are listed above.

Of maintenance: Minimal, limited to staffing costs and replacement materials for students.

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Career Education
—Alternative School
Grades 9-12

EXPERIENCE-BASED CAREER EDUCATION (EBCE)

Far West Laboratory

San Francisco, California

OVERVIEW, DEVELOPMENT AND RATIONALE

This program developed by the Far West Laboratory is one of four funded to develop career education programs using the entire community as a school (see P. 80). Experientially-oriented, it integrates basic academic skills, (reading, writing, oral communications, and math), career development (awareness and self-development), and life skills (interpersonal, problem-solving and decision makings). Students do not attend traditional classes but spend most of their time at community-resource sites in planned one-to-one or small group learning activities with working adults. Home base is a central learning center where specially-trained learning coordinators integrate, monitor, counsel and evaluate individualized student projects which are carried out at community sites and are the principal means of organizing student learning and awarding credit for work.

Seminars and other group sessions support and expand upon students' experiences and assure them broad exposure to major fields of study and work. *Project Planning Packages* (in Commerce, Communications and Media, Life Science, Physical Science and Social Science) contain goals and guidelines for planning individualized projects in career/subject fields, as well as criteria for assigning credit. Each package contains a broad career area; goals; minimum requirements for credit; concepts and process skills; sample projects; annotated list of resources available with relevant learning activities; readings; group discussions; bibliography; project ideas and methods of completions; careers to explore; and a list of courses for which students receive credit. The completed project is evaluated and credit given.

Community experience enables students to discover the utility of basic skills and to expand their skills through practice in real-life settings. Students with skills deficiencies as well as those desiring advanced study, use individualized materials (assisted by tutors); or they may enroll in regular high school or community college courses. Learning coordinators work with 25-30 students each, helping them to develop long-range goals, shorter-range objectives, and project plans; a resource analysts develops and maintains the external resources; and a skills specialist diagnoses student needs (e.g., in reading skills) and coordinates supplementary learning activities (such as tutorials or workshops in basic skills). Program emphasis is on helping students to acquire skills needed for lifelong learning. Using an inquiry process, students design their own projects under staff supervision. Program hand-

books and materials offer guidelines within which students and staff make decisions, and tools for documenting student plans and progress.

Students who successfully complete the program by satisfying EBCE competency requirements receive a high school diploma. Requirements include 25-39 hours per week on program activities, producing at least one tangible product. Students must explore at least six occupations each year they are in the program. Staff members involved in the program are learning coordinators, a resource analyst (1 per 200-250 students), a program director, and a skills specialist (1 per 200-250 students) to coordinate the supplementary activities such as tutorials and workshops. These functions can be combined variously to accommodate the requirements of any district.

The FWL/EBCE model is a complete system which can be adopted in whole or in part. It was developed and tested in a pilot program in Oakland, California and later adopted by the Oakland Unified School District as an all-city high school. As of 1976, 13 other school districts throughout the nation were operating programs based on this model, with additional districts scheduled for implementation. Its dissemination is supported by the National Institute of Education, The Office of Educator's Vocational Education Act – Part D program and the National Diffusion Network.

ESSENTIAL ELEMENTS

- An alternative school integrating basic academic skills, career development, and life skills.
- Use of the community as a school, to provide experience sites.
- Use of a Central Learning Center.
- Individualized program and instruction.
- Use of *Project Planning Packages* in various areas, as base for all activities and credit.
- Use of special staff comprising learning coordinators, resource analyst, program director and skills specialist.
- Use of varied teaching methods – tutorial, small group, workshops, independent study, etc.
- Involvement of parents, business and community leaders.
- Granting of high school diploma.

GOALS AND RESULTS

The overall goal is to promote growth in three areas: basic skills, career awareness and interpersonal skills – all needed to function in the adult world.

Evaluation efforts concentrated not only on measuring the program's impact on development of basic skills, but also on determining the extent of change in students' attitudes toward their school, their future and themselves. Through evaluations in several settings with a variety of students – using pre-post designs and comparison groups – the program has demonstrated effectiveness in promoting growth in basic skills, career awareness, and interpersonal skills; enhancing motivation and mobilizing community support; and preparing graduates for college work. On standardized tests, project students showed solid improvement in reading, writing, and computational skills. In the affective area, results showed significantly positive attitudes on the part of students, parents and community resource persons.

REPLICATION

Essential requirements are as follcws: Staff required varies with size and scope of program to be implemented. Small programs operate with one staff person. May be implemented as a full-or-part-time program for any number of students, provided that sufficient lead time is available. Can be installed in school classrooms or in a separate facility. Students need access to library and study area. Two weeks needed for staff training. Additional lead time for planning, developing community resources, printing forms, etc. varies with program size and scope. Special equipment and facilities are not needed.

Materials: Project-developed planning packages, handbooks and resource guides are used, supplemented with texts and related readings. Materials are in two major categories – operational and developmental.

Operational materials

FWL/EBCE Operational Handbooks (Available only in four volume set $70.00)

I. Management Volume: Contains Program Overview, Administration, External Relations, and Student Recruitment and Selection.
II. Resource Volume: Comprises Resource Development, Guide for Resource Persons, and Project Package Development.
III. Guidance and Instruction Volume: Describes Orientation, Learning Coordination, and Supplementary Curriculum. This handbook is the core of the set.
IV. Project Planning Packages Volume: Provides guidelines to aid students and staff in planning community-based learning projects in five career/subject areas: Commerce, Communications and Media, Life Science, Physical Science, Social Science.

Developmental Materials

Program Overview (Single copy free; multiple copies at $0.60 each)
Detailed description of the FWL/EBCE program.

Guide to Adoption and Implementation Decisions ($3.00)
Guidelines to help district decision-makers decide whether to adopt, specifying characteristics of the intended adoption.

Staff Development Handbook ($6.00)
General principles for implementing an EBCE program and conducting staff development, guidelines for planning, staff development activities, with detailed description of each.

Values & Information. . .An Approach to Evaluation Planning ($6.00)
Suggestions and guidelines to help a staff prepare evaluation plan based on assessment of local needs and conditions.

Improving Youth Employment Programs Through Experience-Based Career Education: A Prospectus for Linking Education and Work ($3.00)
Designed to aid schools and CETA prime sponsors in planning youth employment programs using principles and procedures of the FWL/EBCE model.

Special equipment or facilities are not needed other than those available in participating community resource sites.

Training: Far West Laboratory provides inservice staff training (2 weeks) in the methods and materials necessary for successful implementation; orientation and planning workshops for school administrators; and on-site technical assistance for adopters.

COSTS

Of implementation: Technical assistance and training services vary from $3,000 to $15,000, according to the characteristics and needs of the particular district. Materials needs and costs are listed above. The program can be operated at local per-student costs, with reassignment of personnel. Telephones for staff/student contact with community are essential. Start-up costs include staff release-time for training and preparation.

Of maintenance: Minimal, limited to staffing costs and replacement materials for students.

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Career Education
— Alternative School
Grades 9-12

EXPERIENCE-BASED CAREER EDUCATION (EBCE) —

Northwest Regional Educational Laboratory

Portland, Oregon

OVERVIEW, DEVELOPMENT AND RATIONALE

This program, developed by the Northwest Regional Educational Laboratory (NWREL) is one of four funded to develop career education programs using the entire community as a school. (see p.80). An alternative program it combines academic and community experience in three curriculum areas: basic skills, life skills, and career development. When needed, remedial work is offered in basic skills. Students must also demonstrate competence in certain skills essential to daily living, such as, knowledge of checking accounts, insurance, and budgeting.

EBCE can be operated as a full-time alternative separate program distinct from the traditional school (even located off-campus), or as an in-school option to supplement traditional instruction. Teachers become managers or coordinators of student learning, and help students choose and use community sites as their primary curriculum resources. Students first explore community sites; visit them more intensively; then complete individualized projects that incorporate basic skills exercises, "life skill" applications, and career development exposures. They are held accountable for their off-campus activities in various ways, including "action zones" for short- and long-range planning and a journal for recording their experiences.

Students work very closely with EBCE staff members who are based in a central learning center, and with community resource people who serve as instructors. They spend from 15 to 20 hours weekly exploring career options and working on their projects. The community resource persons instruct, counsel, and evaluate the students. Representatives from business and labor conduct student seminars, and along with school personnel, parents, and students, share in the program planning and policymaking. Ongoing communication is maintained with parents of participating students. Each community project consists of a topic, activities for completion in the community, resources, evaluation criteria and completion dates.

Other learning strategies included in student plans are special placements, competency certification, student journals, and seminars. Special placements are short-term optional activities chosen by students who need the resources of particular community sites but do not wish to commit themselves to career explorations or learning levels.

Students must meet the following requirements during the year: 1) complete 10 projects; 2) complete a set of 13 competencies; 3) spend a minimum of 15 hours per week at employer/community sites; and 4) complete a minimum of five career explorations and one learning level. They must also demonstrate proficiency in a variety of competencies to the

satisfaction of community experts. The program usually relies on an advisory committee composed of parents, students, and representatives from education, business, and labor. Students receive credit and a regular high school diploma.

The program requires an administrator and a staff to work directly with students in developing and monitoring individual plans, as well as in recruiting, developing, and maintaining community sites. The original program staff consisted of a learning manager (1 per 30 students), an employer relations specialist (1 per 50-60 learning sites) to maintain learning sites and monitor learning activities at each, a learning resource specialist, and a student coordinator. However, staffing needs will vary from program to program, and job responsibilities can be combined to accommodate an adopter's requirements.

The NWREL/EBCE is a complete system which may be adopted in whole or in part. It first began operating in Tigard, Oregon in the fall of 1972 as Community Experiences for Career Education. In 1976 it served 60 high school juniors and seniors and was supported by approximately 120 employer/community sites. Five other communities in the Northwest ranging from rural to urban, have already adopted EBCE materials and procedures, with NWREL assistance. Enrollments vary from 20 to 60 full-time students and include freshmen and sophomores as well as juniors and seniors. Together, the programs serve approximately 175 students and have more than 300 employer/community sites participating.

In 1975, along with the other EBCE models, NWREL/EBCE was approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education. Its dissemination is supported by the National Institute of Education and the U.S. Office of Education's Vocational Education Act – Part D program.

ESSENTIAL ELEMENTS

- An alternative career education program combining academic instruction and community experience.
- Three major curriculum components: basic skills, life skills and career development.
- Use of all community resources – as experience sites and as resource personnel for instruction.
- Individualized program and instruction for each student.
- Use of *exploration* packages and *project* packages for student activities.
- Staff comprising learning manager, employer relations specialist, learning resource specialist and student coordinator.
- Parental involvement in student activities.
- Granting of high school diploma and a career education certificate.

GOALS AND RESULTS

The overall goal is to promote student growth in three areas – basic skills, life skills and career development, preparing them for economic self-sufficiency through active community experience with working adults.

Continuous external and internal evaluation since 1972 has reinforced original predictions that students in EBCE would be able to make a smoother transition to adulthood

because of their community experiences. Evaluative instruments included:

- *Comprehensive Test of Basic Skills (CBTS)* – standardized achievement test series.
- *Self-Directed Search* – a self assessment of perceived competencies and an indirect measure of self-concept.
- Student Opinion Survey – local name of the *Psychosocial Maturity Scale* used to assess life skills.
- Student End-of-the-Year Questionnaire.
- Staff Interviews.

No significant gains were indicated in reading or math, on the CBT's, but significant growth was shown on the Openness to Change and Tolerance Subscales and on the Social Adequacy summary scales. Positive reaction in student and teacher attitudes was indicated.

REPLICATION

Materials: The NWREL materials facilitate implementation of either the whole EBCE program or parts of it; therefore, EBCE handbooks and/or stand-alone packages should be purchased.

Orientation Materials:

- Introduction to EBCE: A 15-minute slide/tape overview of EBCE; available on loan at no charge.
- EBCE Learning Strategies: A 15-minute slide/tape presentation describing the curriculum and learning strategies of EBCE through the actual experiences of a student participant; available on loan at no charge.
- Program Overview Brochure: 12 pages describing various aspects of EBCE. Available upon requrest, single copies at no cost.

EBCE Handbooks: A set of 5 Handbooks – $125.00

1. Management & Organization: Suggestions for planning, staffing, managing, and maintaining community relations.
2. Curriculum & Instruction: Explanations of EBCE content and processes, along with resources available for participants.
3. Employer/Community Resources: Suggestions for recruiting, developing, and using community sites.
4. Student Services: Procedures for recruiting and orienting students, recording their progress, and supporting and guiding their growth.
5. Program Evaluation: Provides suggestions for evaluating an EBCE program.

Handbooks are available alone, although NWREL strongly recommends that training sessions accompany their use. In addition, 5 new products are available as guides for students and staff in the use of community resources for general education purposes, in non-EBCE settings:

- *Experience-Based Learning: How to Make the Community Your Classroom:* A practical guide to community-based experiential learning strategies readily adaptable to a variety of education and work settings.
- *Student Guide to Writing a Journal:* The process of keeping a journal to help adolescents take stock of their lives, their ambitions and their daily problems; encourages self-reflection about experiences and life goals.

- *Student Competencies Guide: Survival Skills for a Changing World:* A workbook to help young people acquire skills they'll need as adults such as income tax filing, handling a bank account, buying insurance and coping with emergencies.
- *Student Record of Community Exploration:* Guidelines for exploring career sites; helps youth match their abilities, interests and needs with those required for work in the community.
- *Community Resource Person's Guide for Experience-Based Learning:* A brief booklet telling community people about experience-based learning and how they can participate, with suggestions for creating effective learning opportunities for students.

Equipment and facilities are those in the participating experience sites. The student learning center may be a separate facility or a location in the high school.

Training: Successful implementation requires one week of training, with a one-week follow-up. The following training options are available:

1. EBCE Awareness Session: A two to four-hour introduction to EBCE, its structure, learning strategies and materials.
2. EBCE Operations Staff Training Session: A four to five-day workshop designed to prepare staff for working with students and community.
3. EBCE Program Analysis Session: A one to two-day session focusing on procedures, delivery strategies, and the resources necessary for initiating and operating EBCE.
4. EBCE Program Planning Session: A two to three-day workshop for program planners to help them understand the tasks necessary for preparing schools, community, and students for EBCE; and to assist them in developing timelines, assignments, and budgets.
5. Seminar on How to Adopt EBCE Strategies: A three to four-day workshop for local staff, focusing on how to use community resources and how to use the student project as the central element in individualized instruction.

COSTS

Of implementation: These relate to staff training, purchase of materials and extent of adoption. Learning center can be housed in existing high school or in separate facilities in the community. Student transportation options need to be examined, as well as time and resources for community site recruitment and utilization.

Of maintenance: EBCE programs operate at approximately the average secondary per-pupil costs in most districts.

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EXPERIENCE-BASED CAREER EDUCATION (EBCE)

Research For Better Schools, Inc.
Philadelphia, Pennsylvania

OVERVIEW, DEVELOPMENT AND RATIONALE

This program, developed by Research for Better Schools (RBS) is one of four funded to develop career education programs using the entire community as a school (see p. 80). A comprehensive, individualized educational program, it combines academic, personal and vocational development within the high school curriculum; at least half of the courses are based on standard school requirements and schedules.

The program focuses on five goals for students: preparation for career opportunities; growth in communications skills and mathematics; increased accuracy and breadth of student perceptions of their environment and of themselves; enhanced motivation to learn; and increased abilities to plan, solve problems, make decisions, and take action. Three interrelated components form the Research for Better Schools Experience-Based Career Education Program: Career Development, Career Guidance, and the Academic Resource Center.

Career Development, the most visible, directs students into the community for contact with working adults and for career explorations. A series of minicourses, each organized around a cluster of related careers, exposes students to many careers and planned field experiences. Independent study projects are developed. Six hours of Career Development are scheduled each week throughout the year. Once a week students leave school and spend the day in the community at a business, government office, or service agency participating in specific preplanned activities.

Career Guidance, correlates students job-site activities with personal and academic interest, needs and skills through structure group and individual guidance sessions. Scheduled for two periods a week, students not only learn skills, but share their on-site experiences.

The Academic Resource Center provides individualized and small group instruction in math and communications skills based on performance objectives. Remedial instruction is provided when needed. Students are scheduled here for eight hours per week. The existing school program provides the remainder of their academic needs.

RBS EBCE is designed to be part of the existing school program. The group works with a process skills curriculum, *The Career Clarification Program: A Problem-Solving Approach*, which has been designed primarily for students in their first year of the program. RBS EBCE was not developed for use in a rigid, predetermined manner; it is meant to be molded to fit the circumstances of the particular community and school district. Some restructuring of

traditional staffing patterns is needed to operate the three instructional components. Regular staff or additional personnel, may be augmented by para-professionals or community volunteers. Resource coordinators are necessary for operating the programs at each community site. In 1976, the operational staff at the pilot site included 5 teachers and 2 aides for the Academic Resource Center, and 8 counselor/resource coordinators for 300 students. A community advisory group aids in recruiting and maintaining community resources.

RBS Career Education was pilot-tested in Philadelphia for three years, adopted by the local school system, and operates as an alternative program for students in Philadelphia, in cooperation with the School District of Philadelphia, the Greater Philadelphia Chamber of Commerce, and participating individuals, agencies, and businesses. By January 1, 1976, 115 students had graduated from the RBS program, 335 students in grades 9-12 had enrolled, and approximately 100 local resources were participating as learning sites. The model is now used nationwide in school districts of diverse demographic and geographic characteristics. In 1975 this model of EBCE, along with the three other EBCE models, was approved for nationwide dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education. It dissemination is supported by the National Institute of Education and U.S.O.E.'s Vocational Education Act – Part D program.

ESSENTIAL ELEMENTS

- A career education program within the existing school structure combining school and work experiences in the community.
- Three major components: Career Development, Career Guidance and the Academic Resource Center.
- Use of mini-courses dealing with clusters of related careers.
- Stress on math and communications skills.
- Individualized and small group instruction based on performance objectives.
- Remediation when needed.
- Use of regular academic program.
- Intensive counseling.
- Use of regular staff and counselors, and resource coordinators with supplementary aides.
- A community advisory group drawn from business and community leaders.

GOALS AND RESULTS

The overall objective is the development of career goals through student participation in community-based activities. The program supports 5 basic goals for students:

1. Preparation for career opportunities
2. Growth in communication skills (English) and in mathematics
3. Increased accuracy and breadth of student perceptions of their environment and of themselves
4. Enhanced motivation to learn
5. Increased abilities to plan, solve problems, make decisions and take action

An experimental evaluation design was conducted at the demonstration site from 1974 through 1976. Experimental and control groups were tested using eight standard instruments to measure career maturity, attitude toward learning environment, self-concept and basic skills. Results support program effectiveness in all areas especially the first three. The program also appears to reduce school dropout rates.

REPLICATION

Materials: Materials developed for the three instructional components must be purchased for students, resource coordinators and staff. They comprise the following:

Planning Materials

Administrative Guide ..... (in revision)

Implementation Materials

Handbook for Career Exploration Program Development $8.00
Handbook for Specialization Programs (in production) $6.00

Career Clarification Program
Group Leader's Edition $24.00
Student Edition ..... $ 6.00

Training Manuals (Available only to agencies receiving training in, and implementing, RBS/EBCE programs)

RBS Career Guidance Training Manual (in production) $12.00
Career Development Workshops Training Manual $12.00

Academic Resource Center Training Manual
Trainer's Edition $50.00
Trainee's Edition $25.00

Filmstrip with Sound $25.00

Overview materials are available free of charge. In-school facilities and supplementary materials are needed for the Academic Resource Center.

Training: In-service training is needed for districts to implement, operate, evaluate and develop their own EBCE program; training materials are provided. Available materials include: overview, planning, implementation, and evaluation materials. Available services include: awareness sessions, planning sessions, training workshops, technical assistance, and evaluation services. Staff training requires 10 days. About 30 days of consultant services are required for each new site.

COSTS

Of implementation: These relate to training of staff, purchase of materials and staff time for recruiting and developing community based learning activities. Start-up costs are estimated at $1,000–$1,500 per student. An initial outlay of $60 per student is required for materials and equipment for the Academic Resource Center, if not already available. Costs of RBS materials were listed above. Consultant, training and staff development services cost $250 per day plus expenses. Training costs for a staff of 12 are estimated to be $1,500.

Of maintenance: About $75 per student for replacement materials and equipment. Maintenance costs for 300 students are about $1,000 per student for the complete academic program.

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PROJECT HEAR
(HUMAN EDUCATIONAL AWARENESS RESOURCE)

Willingboro, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

Project HEAR, a career education curriculum for grades 4-12, provides students with a wide range of information for making career decisions. The focus is in three parts:

1. extending the knowledge of one's own ability (needs, skills, strength, aptitudes, motivations) to correlate with occupational choice
2. extending the knowledge of available careers
3. creating exercises which eliminate career stereotypes and promote experiences in choosing careers

The three curriculum units – Primary (4-6), Intermediate (7-9) and Secondary (10-12) – are non-sexist, ungraded, skill-building, student-centered, sequentially organized and experiential. They encompass the purpose of the program: to provide students with a realistic exploration of the world of work, to remove sex-role myths and stereotypes from career choices, to enable students to make career choices congruent with personal ability and interests. They can be used in any existing classroom structure with any discipline, and for multiple learning needs. The materials were field-tested in 13 school districts with 3,000 students in New Jersey comprising suburban schools and urban communities with large minority populations.

The development of Project HEAR was funded by ESEA Title III/IV-C over a three-year period from 1972-1975. It was validated in June, 1975 and was approved for national dissemination by the Joint Dissemination Review Panel in May, 1978.

ESSENTIAL ELEMENTS OF THE PROGRAM

The program's replication is defined by the use of any curriculum unit or combination thereof for thirty-five classroom sessions (30-35 minutes per session) within a 45 day period, and by district participation in individually designed seminars which facilitate the successful implementation of Project HEAR. The curriculum units are detailed below.

GOALS AND RESULTS

The three goals relate to the 3 student populations addressed – elementary, middle and secondary:

1. *Elementary* school students in the program will show a significantly greater change in perception of occupational stereotypes and greater preference for sex asynchronic occupations (occupations in which men/women outnumber each other by a ratio of 2:1) than a matching control group.
2. *Middle* school students who participate in the program will demonstrate a significantly greater increase in the knowledge of the world of work than a matching control group.
3. *Secondary* school students who participate in the program will demonstrate a significantly greater increase in consistency of occupational preference with occupational interest than a matching control group.

Three evaluation instruments were developed to measure the learner outcomes. The experimental design is a pre-post experimental to control group contrast for all three objectives.

Results indicated changes in occupational stereotypes and several spinoff findings:

Change in Occupational Stereotypes

1. *Primary students* (4-6). Project HEAR has a statistically significant effect in changing both the occupational stereotypes and preference for sex asynchronic occupation of elementary school students who participated in the program.
2. *Intermediate Students* (7-9). Experimental students showed a statistically significant greater increase in scores on a test of occupational information than did a group over the same time interval.
3. *Secondary Students* (10-12). Experimental students showed a statistically significant greater increase in number of occupational preferences consistent with occupational interest than did a matching group over the same time interval.

Spinoff Findings

1. Before program invention, twelfth grade males had well-crystallized values most important of which were economic stability and independence; whereas female values were less crystallized and clarified. After the program intervention, there is evidence of greater value clarification.
2. Increased consistency of occupational preference and student estimates of abilities and aptitudes result in more realistic levels of aspiration. Black and white students show different patterns of response with regard to consistency of preference with estimated ability. Although the program did not achieve a significant level of improvement in consistency in this area it did show a trend in this direction. White students tended to over-estimate – to have an unreasonably high level of aspiration, whereas black students tended to under-estimate – to have an unreasonably low level of aspiration. The program tends to move in the direction of increased consistency for both groups.

REPLICATION

Materials: A descriptive brochure is available free of charge. The three curriculum units include the following components:

Primary Learning Unit (grades 4-6) $59.45 (+10% postage)

Includes Teacher's Manual, 30 consumable workbooks, 30 individual student storybooks cartooned filmstrip/cassette recording and a set of 30 unique slide visuals

Intermediate Learning Unit (grades 7-9) $56.08 (+10% postage)

Includes Teacher's Manual, 30 consumable student workbooks, 30 student and occupations information catalogue, a set of 48 unique slide visuals, a simulation card game with score pad, and 30 brochures on legal rights

Secondary Learning Unit (grades 10-12) $86.24 (+10% postage)

Includes a Teacher's Manual, 30 consumable workbooks, cartooned filmstrip/cassette recording, 30 brochures on legal rights of women in the working world and an Occupation Resource System – an occupational manual key sort with 850 occupational variables.

A school district may adopt any combination of the three learning units at any point in time. Each unit is used independently with no prerequisite requirements; and each contains pre- and post-tests to measure student progress.

Training: The curriculum units require a minimum of teacher/administrator training. Individually-designed seminars address the specific needs of the district personnel to facilitate successful program implementation. During the adoption period, Project HEAR staff provides consultation and follow-up services with teachers, students, administrators, parents, Boards of Education and community members.

COSTS

Of implementation: These relate to release time for staff training and the purchase of Project HEAR materials. District needs determine the number of training seminars, as well as the scope, content and format of the training design. Curriculum units are available at costs listed above.

Of maintenance: Use of the program requires the yearly replacement of the student workbook – the only consumable product.

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LEARN AND EARN

(Component of the Florida Migratory Child Compensatory Program)

Tallahassee, Florida

OVERVIEW, DEVELOPMENT AND RATIONALE

Project Learn and Earn is an individualized prevocational program designed to prevent migrant children of high school age from leaving school by teaching them job entry skills through on-the-job training while they attend regular classes. Initiated in 1971, it was developed: to address the high dropout rate (60-95%) of migrant students resulting from constant movement and short-term enrollments; and to provide migrant students with training for vocational options other than farm labor and with incentive to complete their academic education.

Students are screened, interviewed, and recommended for the course by Learn and Earn instructors, with priority given to those students who are underachieving potential dropouts, and to those students who have participated previously in Learn and Earn program.

The program provides instruction in the following areas:

- Consumer education
- Employability skills
- Career education
- Human relations and self-actualization

Depending on the grade levels served and community resources, students may select courses such as:

- Small Engine Mechanics
- Marine Engine Mechanics
- Typing and Office Skills
- Auto Mechanics
- Supermarket Training (Cashiering and Other)
- Motel/Hospital Training
- Welding
- Sewing
- Upholstering
- Wood finishing

Course development is based upon student interest, community needs and teacher capability.

Learn and Earn runs from September to June with the principal acting as the Learn and Earn instructional leader. Each school day, job-related instruction is given each student for two classroom periods combined into one block. For maximum individualized attention, one certified teacher and one teacher aide handle groups numbering no more than 15 in any class.

Following exposure to pre-vocational courses, students are placed in jobs, at the prevailing minimum wage. The on-the-job training involves up to 10 hours per week. This work

training experience not only helps meet the student's immediate economic needs, but also develops awareness and skills for future full time employment. Teachers visit students at their work sites and in their homes; employers must provide supervision while students are at work.

In-class activities are primarily individualized according to the needs and talents of each student, and comprise hands-on activities, field trips, role playing, games, and contacts with resource people in the community. The nature and sequence of the activities are up to the discretion of the teachers.

Record-keeping is a critical component, allowing for effective individualized instruction and for continuity in each student's progress as he moves from school to school. Teachers continuously monitor and evaluate student progress through skill and concept inventories, and record results in folders kept for each student. In addition to classroom evaluation, students who receive on-the-job training are evaluated by their employers with respect to skill mastery and ability to function successfully in the world of work. Upon successful completion of the Learn and Earn program, students receive school credits for both on-the-job training and related classroom instruction.

Project Learn and Earn was nationally validated, and is awaiting approval as a dissemination site by the Joint Dissemination Review Panel of the U.S. Office of Education. It is currently operative in over 46 locations in Florida.

ESSENTIAL ELEMENTS

- Work-study combination for migrant students, relating work experience to educational curricula
- Exposure to many careers
- Focus on the special economic, cultural and language needs of migrant students
- Provision of supplementary subsistence during on-the-job training
- Parental and community involvement
- Use of checklists and evaluation instruments
- Constant monitoring and record-keeping

GOALS AND RESULTS

The primary objective is to motivate migrant students to stay in school. More specific objectives include:

- To teach saleable skills through on-the-job training
- To enhance student self-esteem and self-confidence
- To provide career information and vocational options
- To help each child realize his/her occupational potential
- To maintain active communication between the school and the community resources to benefit the students

The following criteria were used to document the success of the program:

- the number of migrant children aged 14-18 who attended the program
- the number of migrant children who were placed in jobs
- the number of migrant children who maintained their jobs while in the program
- employer satisfaction with migrant student employees (as recorded on questionnaries)

Program effectiveness was indicated by the increased number of migrant children who attended Project Learn and Earn: 1,318 children in 1974-75, and 1,700 in 1975-76, an increase of 31%. Furthermore, these students showed a high attendance rate (77%-90%), with the attendance rate of job placed students 10% higher than those enrolled students who lacked job placements. Additional proof of program effectiveness was evident in figures of job placement and retention: Over 87% of all L&E children who were placed in jobs retained their jobs while enrolled in the program. In addition, the ratings of satisfied employers were very high. The program can also be credited with providing incentive for the completion of regular high school work. In summary, Project Learn and Earn displayed the following positive results:

- a reduction in the dropout rate
- an improvement in the attendance rate
- the high probability that the migrant child enrolled in Learn and Earn would graduate
- employer satisfaction with the performance of Learn and Earn students

REPLICATION

Materials: Materials used vary with student needs and available community resources. Teachers are expected to develop learning activities appropriate for individual student needs and to select materials to prepare students for occupational experiences. Classroom or teacher space should be provided in each school.

The project developed manual, *Learn and Earn* provides an overview of the program, guiding the teacher in creating awareness materials and activities such as games and role playing. It must be purchased.

Training: Pre- and inservice training for teachers and aides is essential for the program's success. At the beginning of each school year, a state-wide workshop in Florida is held for school district administrative, instructional, and supportive staff members. Teachers and aides also attend local, regional, and state workshops designed to improve teaching skills. Days of inservice follow-up are planned during the school year which allow teachers to share experiences, and to modify and improve their program and materials. Training is available free of charge to those working with migrant children.

COSTS

Of implementation: Initial costs include purchase of housing and equipment. Estimated initial capital outlay – $60,000. Estimated operational costs – $25,600, as follows:

Teacher salary	at $12,000.00
Aide salary	$ 7,000.00
Student stipend (for 15 students over 22 weeks)	at $ 6,000.00
Total	$25,600.00

Of maintenance: Same as estimated operational costs.

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Career Education
—Guidance
Grades 1-12

LINCOLN COUNTY EXEMPLARY PROJECT IN CAREER EDUCATION

Lincoln County Schools
Hamlin, West Virginia

OVERVIEW, DEVELOPMENT AND RATIONALE

The Lincoln County Project was developed to enable students to become occupationally competent by the time they leave the educational system. Addressed to students in grades 1-12 and dropouts, the program structures basic academic subjects around a unifying theme — carrer opportunities and requirements in the world of work, and comprises activities which promote a positive attitude towards: all fields of work; work as a means of obtaining many satisfactions; and one's self in relation to work.

The program is characterized by four major areas:

1. *Career awareness* in grades 1-6 considers the wide array of jobs in society, with their related task requirements.
2. *Career orientation* in grades 7-8 provides knowledge of specific clusters within occupational fields regarding their characteristics, functions, duties and rewards.
3. *Career exploration* in grades 9-10 exposes students to actual work situations and hands-on experiences related to 15 specific occupational clusters — especially manufacturing service, professional, constructions, technical, business, communication and transportation.
4. *Career preparation* in grades 11-12 provides on-site work activities with related inschool studies including intensive guidance and skill development, for drop-outs and out-of-school youth as well.

Students planning immediate job entry upon graduation take courses offered by the Lincoln County Vocational and Technical School in addition to three required courses each day at their own high school, to meet graduation requirements.

Using a team-teaching approach, the program is administered by a project director working with coordinators in curriculum, guidance and human resources, and assisted by paraprofessionals and consultants. Many teaching strategies are employed, including audio-visuals, group presentations, field trips, guest speakers, simulations and hands-on experiences.

Developed as an Exemplary Project in Career Education under Part D of the 1968 Vocational Act Amendments, the program was introduced at grades 1-6 in seven pilot schools in the fall of 1971, and expanded to grades 7-12 in 1972. Following validation, it was approved for national dissemination by the Joint Dissemination Review Panel of the U.S.

Office of Education in December, 1973. Supported by various organizations, businesses, and community groups, the program operates in all of the county's 22 schools (20 of which are located in extremely rural areas) and the county vocational school. No special network funding is provided for its dissemination efforts.

ESSENTIAL ELEMENTS

- A comprehensive career education program for all grade levels, including drop-outs and out-of-school youth.
- Instruction in four major areas: career awareness, (1-6), career orientation (7-8), career exposure (9-10), career preparation and work experience (11-12), all based on a cluster approach.
- Individualized instruction.
- Exemplary activities related to career orientation and experiences.
- Use of many teaching methods, including team-teaching.
- Extensive community and business involvement.

GOALS AND RESULTS

The overall goal was to make students occupationally competent through awareness, orientation, exposure, and experiences in the world of work; and to provide job-placement.

Students were pre/post-tested with the following results:

- In grades 1-6 the *California Language and Math Achievement Test* and the *Occupational Awareness Test* showed that pilot students did significantly better in all three tests than did the central group.
- In grades 7-10 the Attitude and Competency portions of the *Career Maturity Inventory* (CMI) were used. Grades 7 and 8, pilot group showed *no* significant differences on either portion of the *CMI*, but grades 9 and 10 pilot students did significantly better than the control group on both portions of the *CMI*.
- Parents, teachers, and business personnel surveyed reacted positively to the career education project, with a very high percentage urging its continuance.

REPLICATION

The program can be adopted by a single teacher, a school or a district.

Materials: Awareness materials and project-developed materials (reports, resource units for levels 1-6, 7-8, and 9-10, and career awareness tests 1-6) are available upon request. Resource units contain teaching units related to 15 occupational clusters identified by the U.S. Office of Education, suggestions for implementation, and lists of resource materials. Project materials are in the ERIC system and available to potential users at minimum cost.

A wide array of commercial materials is used. Adopting districts purchase materials appropriate to the scope of implementation. No special equipment or facilities are needed beyond that available in most school districts. Title I equipment, including reading labs, can be used for students who receive Title I services. The project has a center to house print and film materials and equipment.

Training: Training is required. (Trained teachers can be used as future trainers.) One or more project coordinators are necessary; existing staff can probably fill these posts. The staff should have access to experts in the field of Career Education (perhaps at a local university). The Lincoln County project conducts continuous inservice training and professional development. Before implementation a week-long workshop focuses on both human relations and technical skills in daily 6-hours sessions. Training for adopting districts is conducted at either project or adopter site, with adopters paying partial trainer costs as well as own costs. Visitors are welcome.

COSTS

Of implementation: There relate to training and to equipment and materials, varying with availability in district and with the planned scope of implementation.

Of maintenance: Approximately $22 per student.

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Career Education
—Community Involvement
Grades K-12

OCCUPATIONAL AND CAREER DEVELOPMENT

Cobb County Public Schools
Marietta, Georgia

OVERVIEW, DEVELOPMENT AND RATIONALE

The Cobb County Career Education Program, developed on the premise that "you can do something with what you have where you are", addresses students of all ability levels, grades K-12. It emphasizes awareness and orientation at the elementary level; exploration and orientation at the middle schools; preparation and information at the secondary level – all built around a career education theme which has as its process goals: 1) the student's evaluation of self-characteristics; 2) the exploration of broad occupational areas; 3) introduction to the economic and social values of work; 4) introduction to the psychological and sociological values of work; 5) consideration of educational and training alternatives; and 6) development of the student's decision making skills related to the other goals.

Analysis of the above goals led to the development of six elements, or types of career education activities on all grade levels, namely: 1) hands-on activities; 2) role playing; 3) field trips into the community; 4) resource people into the classroom; 5) subject matter tie-ins; and 6) introduction to occupations in the community relevant to students' interests and abilities.

The unit approach was chosen as best suited to Cobb County teachers. The concurrent and overlapping nature of the activities stimulated individual creativity and permitted flexibility within any given unit. Through the use of the 6 elements and the unit approach, teachers were encouraged to develop activities relating to the curriculum and meeting their students' needs.

The program comprises 64 teacher-developed units that cover a range of subject matter and span all grade levels. Each unit is a self contained curriculum for a specific subject area, detailing activities listed above, with suggested materials; each is taught for one grading period and is integrated into the existing curriculum.

At the elementary and middle school levels, the goal is to build a base of experience and exposure upon which students can make decisions effectively. At the secondary level, under flexible time scheduling, they visit the business community to observe various occupations. In tenth grade, they choose classes in career exploration, general business or the professions. For eleventh and twelfth graders, vocational skills classes are augmented by work-study programs offering on-site training. At all grade levels, guidance is essential in personalizing the varied exploratory experiences. Finally, a comprehensive placement program assists graduates in finding appropriate employment, further training or education.

The program developed from a state-funded Occupation and Career Exploration Program in 1969, augmented by federal funds from the Vocational Education Act, Part D program. In December, 1973 it was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education. Now in its eighth year, and fourth *without* external funding, the program is implemented system-wide across all grade levels in Cobb County including several new schools and three comprehensive high schools. Only one coordinator is needed for the entire system.

ESSENTIAL ELEMENTS

- A career education program for all grade levels stressing awareness, exploration, preparation and participation
- Unit approach, using 64 curricular units, integrated into the regular curriculum
- Guidance at all grade levels
- Personalized exploratory experiences
- Flexible time scheduling
- Use of the community for field trips, resource persons, and occupational placement
- Work-study options
- Job placement program for graduates

GOALS AND RESULTS

The overall goal is to expose students gradually to the world of work on both a practical and theoretical level. A total of 19 *product* objectives relate to cognitive, affective and skills areas, including reductions in absenteeism, failures and dropout rate; 6 *process* objectives are listed above (Overview). Project evaluation was conducted by North Carolina State University over a three-year period through tests with over 5000 students (treatment and control). Process evaluation was conducted by Georgia Department of Education and USOE. Goals and objectives stated at project outset were achieved to a significant degree.

REPLICATION

Materials: No special materials need be purchased beyond the 64 curriculum units needed for implementation. They may be reproduced for continued use. Units may be purchased as follows:

– Complete Set – 64 units, 1-12)	$80.00
– One Unit	$ 2.00
– Introductory Package – (4 units, 1-12)	$ 6.00
– Elementary Review Package – (4 units, 1-6)	$ 6.00
– Complete Elementary Package – (46 units, 1-6)	$60.00
– Complete Elementary-Middle School Package – (51 units, 1-8)	$70.00
– Complete Middle School-Senior High Package – (30 units, 6-12)	$50.00

A wide variety of printed and audio-visual is suggested with the units. No special equipment or facilities are needed. Brochures are available free of charge.

Training: Training is strongly recommended. Implementation could be on an individual teacher basis; however, effectiveness is increased if small groups of teachers are involved in staff development workshops, where concepts, materials, and suggested activities are introduced and experienced. Such workshops should be conducted with teachers grouped according to year/grade levels or subject areas. Training is conducted only at adopter sites, with adopting districts paying all costs of the project staff, since no network funding supports the dissemination efforts.

COSTS

Of implementation: These relate to the purchase of materials ($80), staff training workshops and release time for attending teachers. Existing materials may be incorporated.

Of maintenance: Negligible, since curricular units are reproducible.

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Guidance
—Career Education
Grade 9

TEACHER-ADVISORS IN A NINTH GRADE GUIDANCE PROGRAM

Hazlet, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

The Teacher-Advisors in a Ninth Grade Guidance Program, developed at Raritan High School in Hazlet, is a guidance oriented project which uses the regular teachers as adjunct part-time students. These advisors work under the direct supervision and control of the professional guidance counselors.

With enrollment at the high school averaging 2000 students serviced by only five professional guidance counselors, each counselor was responsible for some 400 students each year, a considerably heavy load. Since counselors devote more time to the upper classmen whose problems appear more urgent, freshmen were often deprived of adequate guidance necessary during a critical period of their school life.

The Guidance Department and the school administration felt that this lack of adequate guidance services might be partially responsible for the poor orientation of the students indicated by a high rate of absenteeism, a high failure rate and a low rate of extra curricular participation, as noted in a survey conducted by the department in the spring of 1973. The Teacher-Advisor Guidance Program was developed to satisfy these needs.

Under the program, ten classroom teachers serve as teacher-advisors working under the direction of the five regular counselors, two advisors each, with 50 students to each advisor. They are trained at an in-service workshop before the start of school, with weekly follow-up training for the first three months of school, and in bi-monthly sessions thereafter.

Relieved of all other non-teaching duties, the teacher-advisors work for one class period daily in the guidance office in addition to their regular five teaching assignments.

Working closely with their assigned counselors, the advisors meet with their freshmen early in the school year and periodically throughout the entire year, at least 3 times: to make the students feel secure in the new high school environment; to develop in them good attendance habits; and to assist them with course scheduling. Students who appear to have serious problems are referred to the regular counselor.

The project thus provides adequate guidance services to all ninth grade students upon their entry into high school and throughout the crucial first year. It facilitates their adjustment to high school in the areas of study habits, attendance and participation in extra curricular activities. It overcomes the guidance problems inherent in a large, comprehensive high school where the number of counselors is inadequate for the heavy load.

After its first year of development, a one-year grant by ESEA Title III provided for further development and evaluation, which culminated in validation in September 1975.

ESSENTIAL ELEMENTS

The program's replication in another site defined by 1) The assignment of a classroom teacher to each guidance counselor for a unit of 50 ninth grade students to work under the supervision of the counselor in the guidance office as outlined in the validated Raritan High School project, 2) provision of an in-service training program for the project staff of at least 25 hours as recommended by the Raritan project staff.

GOALS AND RESULTS

Goals: As a result of their experience in the program, the students demonstrate a better adjustment; are able to function more efficiently; and are assisted in the development of habits which should lead to greater success. This is measured by:

1. A reduction in absenteeism of 5% as compared with the freshman class before the program.
2. Improvement of academic success with a 20% reduction in course failure as compared with the freshman class before the program.
3. An increase of 20% in the participation by ninth graders in extra-curricular activities over the previous freshman class.
4. An increase in the number of formally scheduled conferences on a regular basis from the former average of one per year to three or more per year.
5. An increase in individual counseling for course selection to 100% of the students.

Comparisons were made with records of previous years on absenteeism, course failure, extra-curricular participation, and scheduled student conferences. In addition, a student and teacher questionnaire survey is conducted at the end of each year to judge the effectiveness of the teacher-advisor/counselor efforts. Results indicate the program has been highly successful in meeting both the needs and the established goals. It has involved over 1000 students and 13 different teachers as advisors. For all goal indicators, with one exception the first year only, the levels established for the objectives were met or exceeded the first two years. The exception is the absenteeism indicator, in that the level of absenteeism was contained at the previous level after the first year of operation, but after the second year the goal of a 5% reduction was achieved.

A secondary goal, to benefit the counselors, is to relieve them of routine conferences with ninth grade students, thus reducing their counseling load to allow more time for those students with serious problems. Positive opinions of the program's worth have been expressed by all persons involved with the program, including students, parents, teachers, administrators, counselors and the Board of Education.

REPLICATION

Materials: The project staff has developed the following materials, available at cost:

Teacher Advisor Guidance Manual: $3.00
A resource manual and training guide for teacher-advisors, the "how-to" for effective operation of the program, discussing their responsibilities,

the goals and objectives procedures, materials and records available in the guidance department and student conferences.

Administrator's Guide: $ 3.50
A manual for administrators responsible for the introduction, implementation, maintenance, monitoring, and evaluation of the program including costs and specific procedures for installation and evaluation.

Film Cassette $15.00
A 15-minute overview of the project, describing the essential elements necessary for replication.

Two manuals address a newly-developed career-education unit entitled, *Career-Decision Making Program:*

Teacher Advisor Career-Decision Making Manual: $ 4.00
A resource manual and training guide for Teacher-Advisors and other project staff describes the Career-Decision Making Unit, its goals and operation

Student Handbook for the Career Decision Making Unit: $ 1.00
A handbook given to all ninth grade students in the Career-Decision Making Program; it outlines the activities conducted during the entire freshman year and provides information easing the adjustment to high school.

Available free of charge are a Project Description Brochure and a Technical Brief which describe the program in varying detail.

Training: Visitation opportunities are available by arrangement. Since success of the program rests on the guidance skills of the teacher-advisors, extensive preservice and in-service training is provided, beginning with an all-day workshop before the start of the school year, followed by weekly 45-minute sessions after school hours for the first three months, and bi-monthly thereafter. Training is conducted by the guidance staff of the adopting school.

COSTS

Of implementation: No special equipment or facilities are needed other than those found in Guidance Offices. The costs of the project's original development were minimal, consisting primarily of $300 stipends for each teacher-advisor for time spent after school hours in the in-service training sessions. Adopting districts should include the cost of the Teacher-Advisor manuals.

Of maintenance: No extra cost unless new teachers are trained in the program, which are then the same as implementation expenses.

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Career Education
—Health
Grades 10-12

U.C.L.A. SECONDARY SCHOOLS ALLIED HEALTH OCCUPATIONS PROGRAM

University of California
Los Angeles, California

OVERVIEW, DEVELOPMENT AND RATIONALE

The program is designed: to acquaint students with the allied health field and provide them with training in it; to offer them positive educational experiences to motivate them to continue their education; to give them skills and information with which they can compete in the world of work; to give them a better understanding of the health field and make them better consumers of its services; and to guide them into positions and training programs for further education. The sequenced series of student objectives is based on inventories of tasks requisite to specific health careers, ranging from "Bio-medical Photography" to "Ward Management."

Originally designed for disadvantaged students, dropouts and low achievers, the program is divided into three one-year phases:

— The first year, Phase I, provides an overview of health occupations; combines academic and vocational education, and relates classroom activities to learning experiences outside the school. The class, comprising 25 tenth grade students, heterogeneously grouped, meets two hours daily. Many field trips to hospitals and clinics enable students to perform tasks in the various departments.

— The second year, Phase II, coordinates organized work experience, in an area individually determined, with continuing school activities. Students spend at least 10 hours per week on the job, supervised by clinical instructors.

— The third year, Phase III, tailors the program to the needs and choices of individual students in cooperative education. Students may work part-time in health care facilities; or take related courses in the high school or community college; or concentrate on college-entrance courses. Upon completion of the 3 year program, each student is awarded a Certificate of Completion.

Instruction is individualized, conducted by Teacher-Coordinators (TC), on a 1:20-30 student basis. Working closely with the TC and students is a school counselor who provides ongoing counseling and guidance. The program is adaptable to different community needs: it may be implemented as a nuclear program with the high school providing the classroom and the community providing at least one health care facility for on-the-job training; or as a total community program with multiple resources participating.

Designed as an experiment in career education in the health field, funded by a 4-year federal grant in Vocational Education, the program began in 1970 with 4 high schools offering an introduction to health careers the first year, work experience the second, and work-study the third. The target audience was minority groups from poverty areas, with 25 students participating in each school. In 1971 and 1972, 200 more students were enrolled. The program has since been implemented in a number of California school systems to serve students from various economic backgrounds. In 1973, the program was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education.

ESSENTIAL ELEMENTS

- Career education in the health fields covering 3 phases over 3 years—orientation, work-experience and work study.
- In-hospital experience.
- Sequenced series of student objectives and inventory of tasks.
- Individualized instruction with remediation as needed.
- Blending of career and academic courses.
- Use of field trips, lecturers, on-site experiences.
- School counselors for ongoing counseling and guidance.
- Teacher-Coordinators as instructors.

GOALS AND RESULTS

Overall goals were to reduce the drop-out rate and low achievement of disadvantaged students through a career education program in the field of allied health occupations, with training for job placement. Students completing the program's three phases should be able to meet four objectives:

1. make an appropriate career choice of an allied health occupation
2. continue in an advanced educational or training program and/or be employed in an allied helath occupation
3. function satisfactorily as employees in the health care system
4. be knowledgeable consumers of health care services

A comprehensive evaluation study of the program's effectiveness used several assessment measures including student grade point averages, student dropout rates, and student responses on standardized test instruments, project-developed test instruments, rating scales, and questionnaires. The results of the study indicated that the program effectively improved students' school performance (grade point average); lowered dropout rates; increased their vocational maturity; enhanced their abilities to function satisfactorily in jobs in the allied health field; and enabled them to be knowledgeable consumers of health care information and services. The program was also successful in placing most of its graduates in hospital or health related jobs.

REPLICATION

Materials: Instructional materials available from the project must be purchased for students, teachers, and clinical instructors. These include:

- *Introduction to Allied Health Careers, First Year Curriculum: Teachers Manual* (564 pp.) $15.00
  Guides the teacher in the health occupations and the health care delivery system; provides detailed instructions for handling the student projects. $50.00
- *Comparative Medical Practices* (a set of 80 2 x 2 inch color slides referred to in the Teacher's Manual)
- *Introduction to Allied Health Careers, First Year Curriculum: Student Manual* (269 pp.) $ 5.00
  Provides guidance for the student in the first year curriculum.
- *Program Guide: A Guide for Development and Operation of A Secondary School Allied Health Career Program* (143 pp.)
  Provides detailed instructions for establishing and maintaining a new program.
- *Student Training Record Booklets* $ .35 per copy
  Three small booklets listing the tasks that the student should learn in the hospital. Mastered tasks provide a record of student accomplishments which becomes valuable when applying for a job or admission to a higher level school for additional training.
- *The UCLA Secondary Schools Pilot and Demonstration Project for an Introduction to Allied Health Careers:*
  A Summary Evaluative Report (128 pp.) $ 3.50
  History of the program, its evaluation over a four-year period; summary, conclusions, and recommendations. Optional purchase.
- *Clinical Instructor Training Program Trainer's Manual* $ 4.00
  Provides the trainer complete instructions for conducting the short, extensive training program, course for allied health personnel regarding how to teach on the job or in the clinical setting.
- *"How to Instruct" Cards* $ .05 each
  Used in the Clinical Instructor Training Program.
- *"Job Breakdown Sheets"* 10 for $.25
- *Nursing Skills for Allied Health Services,* Volumes 1 and 2, W.B. Saunder Co., Philadelphia, Pennsylvania. (A third volume is also available.)
  Vol. 1 $ 6.00
  Vol. 2 $ 6.00
  Vol. 3 $ 7.50
- *Laboratory Skills for Allied Healtg Occupations,* Volumes 1 and 2 (Reinhart Press)
  Vol 1 $ 8.50
  Vol 2 $ 8.50

Other publications available include:

- *Task Inventories* (Classified lists of tasks performed in allied health occupations; useful in preparing instructional units for on-the-job training.) $ 9.00

- *Occupational Analyses* (Useful in developing curricula and courses of study based on tasks students are required to perform on the job.)
- *A Career Model for the Clinical Laboratory Occupations* (An instructional package containing a Teacher's Guide Evaluation Guide, and Student's Manual.) $ 3.50
- *Career Model for Nurse Practitioners* $ 4.00
  Offers ideas for core curriculum materials, suggested instructional units, and performance evaluation.

Science and audiovisual equipment is available in most schools. Some special equipment is needed, such as sphygmomanometers, stethoscopes, splints, stretcher, etc. The program requires a large classroom to accommodate groups of students who can work independently.

Training: Training is especially important for the clinical instructors since in-hospital experience for students is essential to the program. A clinical instructor orientation workshop and training course should be provided those personnel who will be working directly with the students, offered either by the school system or the participating hospital.

Classroom personnel required: For one classroom, one instructor serves as both instructor and coordinator. For more than one class, one instructor per class, in addition to the coordinator, needed. Clinical instructors are needed at health care facilities.

COSTS

Of implementation: These vary with the scope of the program, materials selected, number of students, and equipment. One district's operating costs for a program serving 75 students in three schools, using the facilities of three hospitals, were estimated at $57,000, with $475 allocated for instructional and audio-visual supplies, $1500 for transportation for field trips and exploratory phase, $750 for 75 sets of text/workbooks, and the greater part for staff salaries.

Of maintenance: Minimal, to cover staff salaries, transportation and insurance.

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PROJECT WORK-ED
WORLD OF RELATED KNOWLEDGE AND EDUCATIONAL DEVELOPMENT

Hackettstown, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

Project WORK-ED is a year long career-education course of study for 9th graders designed: to make non-college bound students aware of the many careers available; to enable them to evaluate their own interests and abilities with respect to future goals; and to qualify them to make appropriate choices among high school courses in preparation for their careers.

Introduced into the curriculum of Hackettstown High School in September of 1974, funded by ESEA Title III, the program was developed with a pilot group of 100 students, most of whom had experienced academic, behavioral, and attendance problems in elementary school. The rationale for the target population was that success with this group would ensure success with all ninth graders. One year later, in September 1975, project WORK-ED was validated according to the standard and guidelines of the United States Office of Education.

WORK-ED is a daily two-period course comprising two major components: an area of basic skills in *communications,* and an area of information and experience in *career clusters.*

The Communications area emphasizes *skill proficiency* in teaching communications skills necessary to survive and to succeed in the world of work, that is, skills necessary to research, prepare for, obtain, and keep a job. The students spend one marking period (one quarter of the year) with each of four English teachers to cover all aspects of communications with emphasis upon four: human values, reading, oral skills, and general writing and practical communication skills.

The Careers area stresses *exposure* to eight separate career clusters taught by industrial arts and classroom teachers who attempt to make students aware of the varied careers available to them in each area. The more exposure the student experiences, the wider his career choices will be. In groups of 12, to encourage individualization, the 9th graders are cycled through eight career clusters for 22 school days each: Agriculture, Home Economics, Business, Graphic Arts, Health Careers, Drafting, Wood Shop, and Career Guidance. In Career Guidance, the students are made aware of their own interests, abilities, and future goals through testing, group and individual counseling, and career research.

In the other career clusters, activities cover a wide range: the students receive hands-on experience, go on field trips to various community industrial sites, visit area technical

schools available for them to attend part-time or full-time during their high school and post high school years, view career films, and interact with community guest speakers from all career clusters. Pre and post career awareness inventories are conducted in each career cluster.

The 9th grade program is an outgrowth of an on-going work-study program for 11th and 12th grade students started two years earlier with 300 students. It arose from recognition of the need for earlier decision-making.

Project WORK-ED has great applicability for school districts with large populations of non-college bound students and for urban areas, in a threefold manner: it stresses skill proficiencies needed by students to secure and maintain jobs; it exposes them to careers available in their communities and in the world, many of which would be otherwise unknown to them; and it enhances their own feelings of self-worth in its aspects of values clarification.

ESSENTIAL ELEMENTS OF THE PROGRAM

1) curriculum implementation in all four Communication courses,
2) curriculum implementation in at least 5 of the 9 Career courses of study, including Career Guidance,
3) participation in the two training workshops
4) community involvement, guest speakers, and field trips.

A district may choose to adapt areas of the program rather than adopt the entire program as described above; it thus can utilize the Communication area or the Career area depending on its individual needs and existing programs.

GOALS AND RESULTS

Goal: Ninth grade students who have not chosen the traditional college prep high school course will make career choices based on occupational information and ability to select goals.

The Crites Career Maturity Inventory was administered on a pre and posttest basis. Test scores showed that the students scored significantly higher on the post test over the pre test in the area of Occupational Information and Goal Selection.

In a written student survey, 98% of the students stated that their knowledge of careers had increased, 97% indicated that the course was helpful and relevant to them, and 71% stated that they had made tentative career selections as a direct result of the program. All students in the program justified their 10th grade course selection by correlating it with their future career goal.

A written and taped survey was administered to the 11 teachers and 3 counselors involved with the students for one year. All indicated that the goal of the project was met and that significant growth in career maturity on the part of the students was evidenced as a direct result of the program.

Additional evaluation of the program indicated that students find high school more relevant as indicated by: less disruptive behavior; decreased drop-out rate; decrease in vandalism; decreased truancy; and decreased absenteeism.

REPLICATION

Materials: The following materials have been prepared by the project staff and may be purchased at cost:

– **WORK-ED - The Changing World of Work** Curriculum Manual I (186 pages) A Curriculum Manual for teachers including lesson plans and students material for duplication for 12 courses of study: 4 in Communications, Agriculture, Business, Career Guidance, Carpentry, Drafting Technology, Environmental Science, Graphic Technology, Health Career and Home Economics.	$ 7.50
– **Curriculum Manual** II (72 pages) A Curriculum Manual for teachers, in same format, containing seven additional course of study: 2 Communications, Consumer Education, Introduction to Drafting, Graphic Technology, Math Careers and Music Careers,	$ 5.50
– **WORK-ED Adminsitrator's Manual** (71 pages) A Manual for educators responsible for implementing and coordinating the program; it details the process necessary to adopt the program.	$ 5.50
– **Filmstrip/Tape:** Overview of Project WORK-ED (16 minutes)	$12.00
– **WORK-ED Parents' Manual** Booklet describing the purpose and activities of WORK-ED (8 pages)	$ 1.00
– **WORK-ED Training Manual** (45 pages) A manual for educators who train others to implement WORK-ED.	$ 5.00
– Available free of charge are a **Project Description Brochure** (12 pages) and a **Technical Brief** (4 pages) both of which describe the program in varying detail.	FREE

Commercial materials used to implement the program include: an Occupational Exploration Kit (Science Research Associates); the Kuder Preference Inventory Series (Science Research Associates); the *Crites Career Maturity Inventory*; a textbook, *Introduction into the World of Work* (McGraw-Hill); and Palmer Publications for Communications (Series I, II, III & IV). Supplemental materials used are listed in the WORK-ED Curriculum Manual.

Training: Validated in 1975, project WORK-ED is funded as a demonstration site by ESEA, Title IV-C to offer educators the opportunity to see the program in action, talk to students and staff and examine its materials. The project staff will provide a brief awareness session at teacher training institutes or at sites where 25 or more interested persons are present. A two-day training session plus follow-up consultation are available to the staffs of districts that make a commitment to replicate the program. Personnel to be trained must include an administrator, guidance counselor and one teacher from each of 5 career clusters, at the least. There is no charge for the services of the project staff. Consumer districts are responsible for costs incurred by their staffs for training and program installation.

COSTS

Of implementation: These relate to staff training, materials, and evaluation. The materials developed by the project staff are available at cost and are used in place of 9th grade curriculum material rather than in addition to the 9th grade material used in the past. Maximum cost for materials is $15.08 per student, and minimum cost may be much less.

Of maintenance: No increase in a district's operating expenses; charges for replacing consumable items are minimal.

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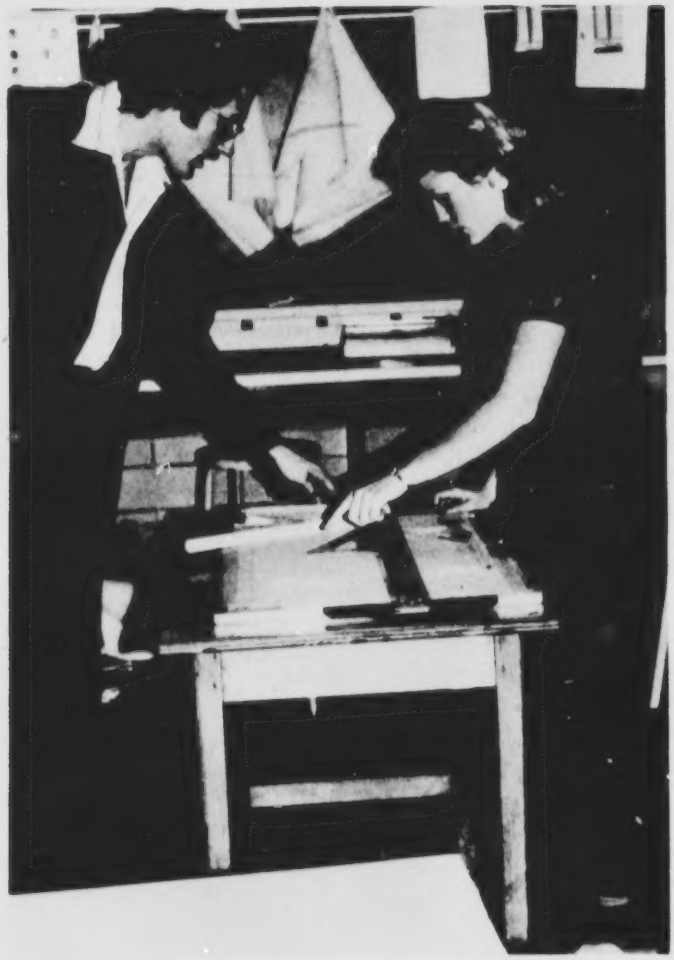

Environmental Education

Environmental Education
Special Interest
– Interdisciplinary Teaching
– Teacher Training
Grades 6-12

PROJECT ADVENTURE

Hamilton, Massachusetts

OVERVIEW, DEVELOPMENT AND RATIONALE

Project Adventure is an interdisciplinary program for junior and senior high school students which introduces, into the traditional courses of study, active outdoor experiences, group problem-solving and an alternative physical education program. Based on the recognition that schooling is essentially a passive process for most students offering little opportunity for testing out abstract ideas in the real world, the program combines Outward Bound techniques and philosophy, human group process activities and academic learning and teaching.

Four main tenets underlie the students' curriculum and the teacher training program:

1. Learning takes place best in the context of "adventure"; – adventurous learning experiences are fundamental
2. Learning is enhanced by student cooperation; – small groups of 5-12 students work together
3. Students should be helped to perceive the connection between direct experiences of reality outside the classroom and the abstract concepts presented in the classroom; – classroom abstractions are tested by direct experiences in the real world of the community and natural environment.
4. Education should enable students to integrate the physical, emotional, social, intellectual and aethetic aspects of their personalities and lives.

Incorporating these tenets, the Adventure curriculum includes programs in physical education, interdisciplinary studies, counseling, and academic subject areas. Parts of the program have even been applied in therapeutic and camp settings. Teachers may adopt or adapt a single program or a combination of programs from the Adventure curriculum, or develop their own Adventure programs. The amount of student time spent in the Adventure curriculum is left to the discretion of the teacher and the school system. The teacher's role is that of stating the problems and limits, giving students the responsibility for finding solutions. This approach has produced measurable improvements in self-concept, physical agility, and competence. It encompasses and supports a wide variety of teaching and learning styles.

The project is made up of two separate components, which may be used singly or together: (1) a physical education program involving initiative games, outdoor activities, and a Ropes Course apparatus that can be constructed by teachers and students (a series of logs, ropes, swings and cables for students to use); (2) an academic curriculum component designed to give hands-on experiences and a practical application of the "basics"; teachers use nearby resources, local issues and natural phenomena as springboards for learning in diverse

courses as creative writing, physics, industrial art, colonial history, health, biology and earth science. The project's strengths are its flexibility, the variety and quality of its curriculum models, and its ability to inspire the enthusiasm of both teachers and students.

Essential to Project Adventure is the teacher training component which trains teachers to adapt and develop Adventure programs in their own classes, in both academics and physical education; and provides skills in program management and teaching strategies and techniques.

Developed in the Hamilton-Wenham Regional School District under ESEA Title III funding, it was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in April 1973 and received the National Education Pacesetter Award. Active in six Massachusetts school districts, the project has trained teachers, school systems and agencies throughout the country. Its dissemination efforts are funded by the National Diffusion Network.

ESSENTIAL ELEMENTS

- Interdisciplinary program involving experience-based learning
- Two major components: physical education and academic curriculum covering diverse subject areas
- Detailed teacher training program
- Four underlying tenets: outdoor adventure, cooperative group learning, experience-related activities outside of classroom, integration of all aspects of life
- Variety of curriculum models
- Use of parent volunteers and teacher aides
- Flexible scheduling
- Extensive reliance on community and environmental resources

GOALS AND RESULTS

The overall goals were to combine active, direct experience with traditional academic subjects, to provide outdoor physical education activities and to develop teachers' abilities to use alternative learning environments. Specific goals related to student achievement:

1. Students will improve in confidence, self-concept and achievement maturation
2. Students will improve in overall physical functioning, balance and coordination
3. Students will participate more in classroom and school leisure time activities

Six pre-post tests were given to 3 target classes of 200 sophomores, using four standard instruments, a student questionnaire and a Self-Rating Scale. Evaluation data show that participation in Project Adventure significantly improved students' self-concepts and levels of achievement motivation, and (in the physical education component) measurably improved physical functioning on five of six measures. Students and parents see growing self-confidence, more active participation in school programs and a "refreshing enthusiam" as outcomes.

REPLICATION

Materials: Project curriculum materials have been developed to be used either as guides for replication or as models for designing Adventure curriculum for particular settings and needs. They comprise the following:

Books and Pamphlets

- *Cow's Tails and Cobras*, A Guide to Ropes Courses, Initiative Games and other Adventure Activities, 150 p. $6.50
  A curriculum guide to the Project Adventure Physical Education program and a manual for Ropes Course construction.
- *Teaching Through Adventure*, A Practical Approach $4.50
  Samples of adventure curriculum taken from high schools and middle schools, in varied subject areas; written for teachers, administrators and others concerned with educational change.
- *Cranking Out Adventure*, A Bike Leader's Guide to Trial and Error Touring $3.00
  A small encyclopedia of information for leaders who are just starting out.
- *Going Camping?* A Basic Guide to Camping with Students $2.00
  A booklet for teachers and group leaders who want to conduct student trips.

Specific Curriculum Units (mimeographed)

- *Gloucester: Doing and Discovering* (English) $ .50
  A curriculum which, using a town as a resource, allows students to work together in groups to accomplish a varied set of objectives, including interviewing, expressive writing and confidence.
- *Cape Code: A Working Manual* (Science) $ .60
  A workbook of field ecology activities used by biology students
- *Acadia: A Working Manual* (Science) $ .60
  A workbook of field ecology activities used by biology students
- *Colonial Life* (Social Studies) $ .50
  Specific ways to use the local environment to develop an understanding of life in the colonies; involves the students with institutions and people in the community.
- *Urban Awareness: A Field Trip* (Guidance) $ .50
  An activity-based approach to counseling, with specific applications for everyone in a school community, not just guidance people.
- *Student Tutoring as a Project Adventure Activity* (Community Service) $ .50
  A rationale for student tutoring, case studies, and an effective program structure.
- *Treasure Along the Parker River* (Middle School Curriculum) $ .75
  An interdisciplinary unit in which two weeks of group activities in class culminate in an exploration of a local river.
- *The Great Newbury Marsh Hike* (Interdisciplinary) $ .75
  Combines physics, ecology, and history in a series of activities culminating in an exploration of a salt marsh.
- *The Seacoast as Teacher* (Interdisciplinary) $ .75
  An extensive unit on marine ecology, involving field investigations of the coast, barrier beach, salt marsh, and tidal pools of Rhode Island.

Three evaluation booklets are also available presenting methods used and results of annual program evaluations. No special staffing or facilities are required, although Ropes Course construction for the Physical Education program usually calls for some open space around playing fields or in a wooden area.

Training: Attendance at the five-day training workshop is essential, for one or more interested teachers, who train in either the physical education or curriculum workshop, or both. A supportive administration must be willing to incorporate new teaching styles and programs that involve some flexibility in scheduling.

Three levels of training are offered:

1. *Intensive* training courses several times a year for graduate credit
   - Curriculum Development Workshop – to explore "adventure curriculum" and write their own
   - Physical Education Workshop – to learn the construction of Ropes Courses, and the skills and games used
2. Brief workshops
   - Short Curriculum Workshop (2-3 days), to explore short, specific units, and develop their own; emphasis on learning to incorporate Adventure Curriculum into existing courses
   - Specific Skills Workshops – day-long sessions focusing on specific skills to meet a variety of needs
3. An Introduction to Adventure – a day-long seminar to present the concepts and methods used in the program.

COSTS

Of implementation: These vary with the scope of implementation, size of school system, numbers of students and teachers, and community facilities. Typical costs for most adoptions include a five-day residential teacher-training program (approximately $175 per teacher for room, board and materials). For the Physical Education component, schools should allow a minimum of $1,800 for Ropes Course materials. For the academic component, costs may include transportation, substitutes, camping equipment, etc., depending on the curriculum developed. Estimated installation costs, excluding teacher training, are $5 per student.

Of maintenance: Estimated at $2 per student, assuming no program expansion.

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PROJECT ECOLogy
(Environmental Career—Oriented Learning)

Highline School District
Seattle, Washington

OVERVIEW, DEVELOPMENT AND RATIONALE

Project ECOLogy is an environmental education program for K-12 students of all abilities, teachers and curriculum planners. Designed to introduce ecological concepts, career information and futures understanding into the traditional academic curriculum, the project uses a motivating series of teacher-designed lessons-units-strategies-activities in the classroom over a two- to four-week period. The units are called Environmental Learning Experiences (ELEs); and supportive resource packages are called Project Activity Kits (PAKs). The program has developed 42 ELEs and PAKs to be used at specific grade levels K-12, covering a wide range of academic disciplines; their lessons, teaching strategies and activities involve approximately 16 hours of classroom time. They contain all the information for the teacher to implement an environmental learning experience in the classroom. Attractively packaged with a picture of the Project Activity Kit, each contains: a conceptual overview of the unit, background informations for the teacher, master materials lists with bibliography of source materials, detailed lesson plans with evaluation procedures, and suggested supplementary activities. A PAK contains materials not found in the average classroom but designed for use with a specific ELE. The number of lessons within each unit varies. Evaluation activities and test instruments alert the teacher to the overall effectiveness of the ELE in producing student change consistent with ECOLogy's specific behavioral objectives. Materials developed by the project focus on the major environmental categories of concern: energy, water, air, solid waste, and noise. The materials are easily adopted bv individual classroom teachers.

The program developed from recommendation of the Highline School Board's study committee on environment problems – that environmental concerns be included in the district's education goals. Teams of district teachers in summer workshops developed the project's approach and designed the ELEs and PAKs for classroom use. Piloted in 50 classrooms, the project was completed, validated, and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in December, 1975. As of 1976 over 400 teachers have been active participants in Project ECOLogy and over 5,200 students have received ELE instruction.

ESSENTIAL ELEMENTS

– Environmental education for students of all grades and all abilities.

- Use of individual units by classroom teacher or total program by school districts.
- Use of 42 Environmental Learning Experiences (ELE) and 17 Project Activity Kits (PAK)
- Activities involving field trips and community resources.
- Constant evaluation of individual units and total program.
- Incorporation of units into traditional academic curriculum.
- Teacher training an essential.

GOALS AND RESULTS

Goals are threefold:

- To introduce environmental concerns, careers and future studies into traditional academic curriculum
- To increase student knowledge of ecological concepts and provide understanding of environmental issues
- To train teachers to use their subject areas as a vehicle for teaching environmental information

In a pre-post test design, locally developed instruments measured both the effectiveness of each ELE in producing cognitive change in participating students, and also the lower cognitive processes identified in *Bloom's Taxonomy of Education Objectives: Cognitive Domain.* Analysis of test results showed significant gains in student knowledge of ecological concepts and information presented in the ELE lessons.

REPLICATION

The program may be adopted in three different ways:

1. *System Adoption:* adopting district commits to hold training workshop, select and pilot 10-22 Environmental Learning Experiences and develop 0-14 Project Activity Kits, and run evaluation program with each ELE adopted.
2. *Teacher Adoption:* teachers install the program, teaching at least one ELE and running the evaluation activities.
3. *Adaption:* purchasing the materials and not operating the evaluation program.

Materials: 42 Environmental Learning Experiences (ELE) have been developed by the project for 4 levels: 6 for Primary (K-3), 20 for Intermediate (4-6), 10 for Junior High (7-9) and 6 for Senior High (10-12), at $12.50 each; complete set $100.00. In addition, 17 Project Activity Kits (PAK) have been developed for use with specific ELEs; these are not available for purchase but must be built by adopters.

ELE units available for use with adolescents include the following: (*indicates availability of a PAK for use with the unit)

Junior High	Senior High
Overpopulation Produces. . .	The Drip Impact*
From Rocks to Pots*	Ever Stop to Think
Exponential Explosions	Food: The Challenge to Manage
Sub Pak II*	Natural or Organic Foods?
Archaeology – Ecology	Air Pollution: What You Can & Can't See

Junior High	Senior High
Energy Futures*	The Sky is Falling: A Study of Particulates
Anthropology – Ecology	
Cities Then and Now	
Water	
Living Today with an Eye toward Tomorrow	

We Are The Future – Review book describing the units $1.00

Materials, equipment and facilities used are largely available at school; supplemental materials may need to be purchased. Seven ELE units with community components require special local facilities, (e.g. visits to local streams, sewage treatment plants, etc.). Awareness materials are available at no charge.

Training: Teacher training is a major component of the program. Districts considering a system adoption should plan for a 1 1/2 day workshop involving 23 K-12 teachers and two administrators, held in July. In early September each participating teacher attends a 3-hour workshop focusing on the specific ELE to be implemented. Visitors are welcome by appointment. A team of 4 trainees is available for workshops; costs of service for awareness, training, evaluation, or other activities must be borne by adopters.

COSTS

Of implementation: If total packages of ELEs and PAKs are adopted: start-up, $3,280; management, $1,600; and operation, $530. Costs would be $5,410 for 24 schools, which includes all costs – resource materials, kit, workshops, and evaluation.

Of maintenance: Minimal, except to renew supplies to maintain the PAKs. If project staff is involved, consultant services to review evaluation program results, evaluation report writing, computer services, and supplies to maintain 12 PAKs used on six week cycles are estimated to be $2,130, based on the involvement of 2 administrators and 22 teachers.

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Environmental Education
Teacher Training
Grades K-12

ECOS TRAINING INSTITUTE (ETI)

Yorktown Heights, New York

OVERVIEW, DEVELOPMENT AND RATIONALE

The ECOS project was initiated to assist school districts in developing and implementing environmental education programs. The project formulated a process for infusing environmental activities into existing curriculum through community–school interaction. Its ultimate aim was to foster attitude change in students regarding responsible environmental stewardship. The ECOS process (the acronym stands for Environmental Education Community Opportunity for Stewardship), is now offered in a 3-day workshop by the ECOS Training Institute (ETI) to effect many types of educational changes, besides environmental, with little or no disruption to existing programs.

The process has three interrelated elements: curriculum infusion, stewardship, and community/school interaction. *Curriculum infusion* is the basis of the program. Through a step-by-step procedure, teachers examine their course and incorporate environmental (or other priority) concepts, knowledge, skills, attitudes, and activities into appropriate segments (or, perhaps, choose to create a new course). *Stewardship* is the students' active participation in the management of problems, i.e., a decision-making process. Suggested stewardship activities are demonstrated at the workshop. These and additional activities are built into the new, infused curriculum. *Community/school interaction* is the joint cooperation of schools and community in mutually beneficial educational efforts. Teachers are encouraged to call upon a wide range of resources when implementing their curriculum, and community interaction provides a ready source of people and materials.

Launched in 1971 under federal funding, Project ECOS was validated, approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in May, 1974, and funded as a training institute (ETI) as part of the National Diffusion Network. In its first six years of existence ETI has trained 1100 professionals in 274 school districts from 22 states, of which 110 districts adopted the program, 50 districts produced high-quality environmental manuals and over 1200 students were exposed to ECOS sponsored environmental programs.

ESSENTIAL ELEMENTS

- Process for educational change (with stress upon environmental change)
- Three major interrelated elements: curriculum infusion, (teachers) stewardship (students) and community-school interaction.

- Involvements of students, teachers, administrators, community, industry and ECOS staff.
- Attitudinal and behavioral impact on students.
- Use of curriculum packages, K-12 levels.
- Training workshops.

GOALS AND RESULTS

Goals address two major areas: effectiveness of teacher developed curricular materials, and impact upon student attitudes and behaviors.

1. Teachers from adopting school districts will design interdisciplinary environmental educational curricula as a result of participation in the training program.

   Twelve different teacher-developed manuals, rated by 20 curriculum specialists on the *Lawler Scale of Curriculum Material*, were of uniformly high quality in overall rating of 4.1 on the 5 point scale.

2. Student ratings on three areas:

   (a) students exposed to the environmental program will demonstrate significantly more favorable attitudes regarding responsible environmental stewardship as compared to a control group
   (b) students will show no loss in basic skills as a result of program involvement
   (c) students will take action to improve the environment

Results showed the following:

- ECOS-developed environmental awareness tests, administered on a pre-post test basis to experimental and control groups, showed that students exposed to the program develop a more favorable attitude toward responsible environmental stewardship.
- Based on the *Stanford Achievement Test*, program students made comparable gains, indicating no loss in basic skills
- After three years, ten times as many students were engaged in research and monitoring activities in the regional environment

REPLICATION

Materials: All materials needed for implementation are available from the project. These include: K-12 curriculum packages containing examples of units which may be infused into an existing program, and "how-to-do-it" manuals which detail steps for curriculum infusion, community involvement, and program change. Training materials are free of charge for trainees. They comprise the following:

K-12 Programs

- Sense Awareness Through Environment ..... $ 6.00
- Applying Environmental Awareness ..... $18.00 (Total pkg.)
  Includes: Understanding Man's Relationship to the Environment, K-6..... $12.00 (purchased separately)

A Program for Environmental Awareness at the Junior High Level ..... $ 3.00
(purchased separately)
Environmental Stewardship Elective – High School ..... $ 5.00
(purchased separately)
– Exploring for Action ..... $20.00 (Total pkg.)
Includes: A Multi-media/Multi-disciplinary Approach to Environmental Learning K-4 ..... $ 3.00
(purchased separately)
Population: An Interdisciplinary Approach to Environmental Education Grades 5-7 ..... $ 4.00
(purchased separately)
Everything You Wanted to Know About Your Town But Were Afraid to Look Grade 8 ..... $11.00
(purchased separately)
Resource Management Awareness – High School ..... $ 5.00
(purchased separately)

Middle School Programs (additional)
- Environmental Studies – Air-Land-Water ..... $ 2.00
- Historical and Ecological Study of a River Valley ..... $ 2.00
- Interdisciplinary Land Use Study – 7th Grade ..... $ 6.00
- Environment – A Humanistic Approach 6-Grade ..... $ 2.00

High School Programs (additional)
- Environmental Education – Three High School English Electives ..... $ 3.00
- Local Environmental Study ..... $ 2.00

No other materials or facilities are needed to implement the program, unless teachers wish to develop environmental monitoring stations.

Training: Attendance at a three-day workshop is essential. Prior to training, the superintendent must complete a district profile and sign a letter of agreement which provides that: (1) workshop participants will have planning time to meet as a group, if they wish, for a period of 9 months after the workshop; (2) workshop participants will present an awareness program to colleagues, Board of Education, and community members. Adopters are asked to provide a team of 4-5 educators from one building, to include an administrator, teachers, and a community worker to serve as a resource person.

ECOS Training Institute now provides three different workshops:
- K-12 Curriculum Design – (3 days) – techniques of infusing new educational priorities into existing curricula; applicable to many disciplines including environmental, career, and energy education.
- Career Education (2 days) – same as above, with stress on career education.
- Dynamics of Change (1 day) – basic introduction to the underlying philosophy of all ETI programs; principles apply to most of the K-12 curriculum.

COSTS

Of implementation: None, apart from release time for teacher training, unless district elects to implement monitoring programs.

Of maintenance: None

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PROJECT I–C–E
(INSTRUCTION–CURRICULUM–ENVIRONMENT)

Green Bay, Wisconsin

OVERVIEW, DEVELOPMENT AND RATIONALE

Project I-C-E is a K-12 curriculum and instruction program for environmental education. Its major goal is to lead students directly or subtly to awareness, appreciation, recognition, and action regarding the vital issues, concerns, and factors shaping environmental attitudes and values.

Twelve major environmental concept categories provide a framework for the program, as well as focal points for each grade level and subject area:

(1) The sun gives energy
(2) All living and nonliving things are connected
(3) The earth is limited to how much life it can hold
(4) Life needs clean water
(5) Life needs clean air
(6) Natural resources mean a better or a poorer life
(7) How we use land depends on many things
(8) What is important to use depends on many things
(9) Man changes his world
(10) Unless we plan ahead, we could gain something today only to lose it tomorrow
(11) You and others can change your surroundings
(12) We must care for the earth

The first six concepts deal with natural principles, the rest with man's manifestation of nature. The entire program is neither scientifically nor technically oriented, it is based on the assumptions that (1) all teachers can and should teach environmental concepts, and (2) all subject areas must be used to reinforce environmental education.

Through the use of a supplementary episode ("mini-lesson") design, the learning activities may be integrated into traditional courses of study by substitution of content or activity; hence the program does not make an additional instructional demand on teachers. The lessons are referenced as to concept; they have subject area and topic designation; they suggest several alternative student-centered activities based on cognitive and affective objectives and necessary skills; and they include suggested reference and instructional resources for teachers. The curriculum is detailed in a series of 39 separate curriculum guides, each listing a series of mini-lessons (or episodes).

The program emphasizes use of the urban and national community as an extension of and a reinforcement for classroom activities; teachers are encouraged to use all available resources

human as well as natural, to devise varied and thorough programs. Project curriculum guides and model field-activity units can be used by individual teachers, or can be readily implemented by groups of interested teachers, by schools, or by a K-12 system without regard for locale or circumstances. No specal equipment, facilities, or staffing are necessary.

Project I-C-E arose from increasing concern over the declining quality of our natural environment. Over a five year period more than 200 teachers in northeastern Wisconsin (representing all grades and all subjects) created learning activities based on the 12 environmental concepts. The curriculum was designed to combine theoretical in-class learning with tangible outside experience, in hopes that students and teachers would move from awareness of the environment to active commitment to its improvement.

Developed under ESEA Title III and validated by the state of Wisconsin, it was approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in May, 1975, and now functions as a Developer-Demonstration site (DD) through the National Diffusion Network. The program has provided materials and training to over 1,100 teachers in 44 schools or districts in 17 states.

ESSENTIAL ELEMENTS

- Environmental education based on 12 concepts.
- Interdisciplinary structured approach, integrating all subjects (except foreign language).
- Use of various environmental and community surroundings (urban and natural) as extensions of classroom study.
- Use of curriculum guides containing mini-lessons (or episodes).
- Behavioral objectives.
- Combination of theoretical and practical approaches to environmental learning.

GOALS AND RESULTS

The primary goal is to make students aware of, appreciate, recognize, and take action on, the issues, concerns and factors affecting the environment.

Fourteen northeastern Wisconsin schools were pre- and post-tested – 3 control schools and 11 pilot schools – seven previously associated with Project I-C-E, and four new to the program. An evaluation design, using project-developed criterion-referenced instruments, tested for validity and reliability, showed statistically significant student cognitive gains on the 12 major environmental-concept categories for sample grades 2, 5, 8, and 11. (Exception: grade 11 results were inconclusive, probably due to insufficient implementation of the program). Teachers and parents also noted that students were more aware and action-motivated toward various environmental issues.

REPLICATION

Materials: Extensive project-developed materials include the following:

- a series of 30 environmental curriculum guides that encompass all major subject areas for grades K-12
- a set of 33 field activity models that include suggested activities and teacher tips

- a media catalogue that lists audio-visual and published materials available as references/ resources to teachers
- a program brochure and strategy handbook, *To Catch a Falling Star*, that provide background and implementation information respectively
- slide/tape programs that illustrate the active and applied dimensions of the I-C-E program, including the 12 environmental concept categories

The complete set of 39 curriculum guides, the Media Resources Catalogue and Concept Rationale booklet cost $85.00.

These materials only establish the conceptual framework and are designed for use with supplementary materials suggested in each learning unit (episode design). Materials should be used appropriate to the needs and resources of the classes. The staff has developed a variety of awareness materials including a slide/tape program entitled "Man Needs His Environment," an inservice program for teachers that demonstrates the application of the twelve basic environmental concepts.

Training: A 5-hour training period *at the adoption site* is needed for implementation, since the program aim is adaptation to the community of the adopter site. Visitations to the project center must be made by appointment. An adaptation agreement with a school or district requires:

- A minimum of 20 teachers in the district to be trained, or a total building staff, if less than 29.
- Acquisition of necessary materials for staff involved.
- Commitment of teachers in the program to teach a minimum of 6 of the 12 program concepts.
- Local responsibility to monitor program implementation.
- Evaluation feedback from teachers on "episodes" used via simple checklist rating forms.
- Pre-Post Test evaluation of students in sample grades 2, 5, 8, and 11, as available.

COSTS

Of implementation: Adoption cost, based on teacher materials, is an average of $5 per teacher.

Of maintenance: These are negligible and cover only replacement of material.

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PROJECT KARE

(Knowledgeable Action to Restore Our Environment)

Blue Bell, Pennsylvania

OVERVIEW, DEVELOPMENT AND RATIONALE

Project KARE was established to strengthen environmental studies in local schools. The KARE approach encourages students to confront real environmental problems in action-oriented, interdisciplinary activities. Its primary goal is the development of attitudes and understanding rather than strict exposure to information. Students, teachers, and community members work together to find answers to questions THEY have raised. No specific curriculum is set out for them to follow. Instead, the KARE approach is implemented through the establishment of Local Action Programs (LAPs) of environmental study wherein students confront tangible problems in their surroundings and actively implement solutions arrived at through careful assessment. This approach has been adopted in over 200 Local Action Programs conducted in local schools throughout the country, all differing significantly in size, demography, and wealth.

The programs focus on a variety of environmental problems, including water pollution, community deterioration, and air contamination. Dealing with reality-based problems leads to cognitive development at awareness, transitional, and operational levels. Each of these 3 levels has activities based on a sequence of process skills (such as observing, categorizing, comparing, collecting data, etc.) Attitudes toward environmental issues are questioned, clarified, and frequently reformed. Multischool cooperation develops, since enviromental problems ignore socio-political demarcations. The KARE approach is implemented by classroom teachers working as an interdisciplinary team. In elementary schools, teachers from two to eight classes at various grade levels cooperatively install the approach. In secondary schools, teachers of two or more disciplines are involved. The local school staff should consist of enthusiastic teachers and creative, resourceful administrators willing to work with students in planning and conducting environmental studies activities. In addition, staff should be willing to leave the school building with their students; coordinate community involvement; and carry out curricular change on an incremental basis.

The amount of time participants spend on Project KARE varies widely from one LAP to another. In some cases, LAP activities take place during regular school hours as course or club projects; in other cases, time is spent after school hours or on weekends.

Because of the interdisciplinary approach, multiple references are used rather than a single text. Twelve publications and two films prepared by the staff suggest activities and serve as a guide to the KARE approach Specific curricula are determined by the teachers,

students and community members working together in each LAP, according to the particular needs and resources of their situation.

Since 1971, the project has been serving schools in five counties of southeastern Pennsylvania as well as in Philadelphia; between 1971-75, more than 75 Local Action Programs served as pilot tests for the KARE approach. In June 1975, Project KARE was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education. Since 1975, over 37 three-day workshops have been conducted involving approximately 175 schools and over 750 participants in 13 states, affecting over 55,000 students.

ESSENTIAL ELEMENTS

- An interdisciplinary, flexibly structured approach to *active* environmental education
- Establishment of Local Action Programs (LAPs) in schools for studying community's problems
- Multi-teacher, multi-school and inter-community cooperation
- Planned activities for cognitive development at three levels – awareness, transitional and operational
- Cooperation among students to promote team action
- "Hands-on" experiences in solving environmental problems
- Use of local human and material resources

GOALS AND RESULTS

The overall goal is to strengthen environmental studies in local schools by developing attitudes and understanding through an interdisciplinary "hands-on" process-learning approach.

During development, the KARE approach was evaluated by ERANDA, Inc. using a comprehensive evaluation design. Six products were measured: general cognitive growth, localized cognitive growth, mastered competencies, attitudinal growth, effective learning atmosphere, and behavioral changes. Generally, students grew in both knowledge and attitude, pretest to posttest. Control groups were used. Additional studies involving 22 LAPs and over 800 students indicate that students from 21 of the LAPs made significant pre-post gains in environmental knowledge and attitudes and in positive learning behaviors (independence, responsibility, alertness). Positive data of program impact was also obtained from teacher anecdotal records and teacher ratings of students' environmental skills.

REPLICATION

Materials: Multiple references are used rather than a single text. The project staff has developed 12 curriculum activities guides for diverse environmental areas, and 2 color-sound films which document the activities of numerous KARE programs and describe procedures for establishing Local Action Programs.

Curriculum Guides: (if purchased as a complete set)	$50.00
– Water Pollution and Environmental Studies, Volume I and II	8.75
– Water Pollution Equipment and Environmental Studies	6.75
– Solid Waste and Environmental Studies	6.75

– Birds, Bugs, Dogs, and Weather and Environmental Studies	6.75
– Selected Environmental Topics for Use With Elementary and Junior High School Students	5.75
– Interdisciplinary Environmental Studies	6.75
– Electric Power Generation and the Environment	5.50
– Environmental Studies for Students with Special Education Needs	6.75
– In-Depth Environmental Studies	6.75
– School Sites, Development and Utilization for Environmental Studies	3.00

Student Workbooks:

– City Streets: An Outdoor Classroom	3.00
– The Cemetery: An Outdoor Classroom	3.00

Films: (16 mm color/sound)

– Environmental Studies – The KARE Approach.	Purchase	$150.00
	Rental	20.00
– Urban Studies: Two Ways.	Purchase	$150.00
	Rental	20.00

(Films are available only from Con-Stran Productions, 3600 Conshocken Avenue, Suite 2108, Philadelphia, PA 19131.)

Brochures, technical reports program description and evaluation reports are available free of charge.

Training: Staff training is essential. To qualify for training, schools must be willing to attempt curricular change in small, discrete steps. In this process, the schools initiate Local Action Programs and use activities from KARE Curriculum Guides. School personnel must participate in a 3-day training workshop, in which they acquire process skills; prepare plans for Local Action Programs; design evaluation procedures; and receive a set of KARE curriculum materials. Costs of the workshop ($300-$1,500), held at adapter sites, are shared by KARE State Facilitators and adapter schools. Within 6 months following workshops, KARE staff visit each school building, consult with the workshop teams regarding progress of LAPs and certify the adaption. Visitors to KARE are welcome by appointment.

COSTS

Of implementation: Initial costs vary considerably according to the grade level and the nature of the environmental problems facing the new Local Action Program. Curriculum guides need not be purchased, but participation in training workshop is required. On the average, trainees spend $100 - $500 local money for equipment as they establish their Local Action Programs. Costs may run from $3 - $7 per student, including materials, travel, substitute salaries, and workshop expenditures. KARE LAPs are funded for one year, after which they must be fully subsidized by the adopting school.

Of maintenance: Costs are minimal, after installation.

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*PRIORITY ONE: ENVIRONMENT POLLUTION CONTROL EDUCATION CENTER

Union, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

The Pollution Control Education Center's program, *Priority One: Environment* is a 13 unit, interdisciplinary program for elementary, junior high and senior high school classes designed to develop students' interest in the wise use and preservation of the biosphere. Values clarification and decision making activities support informative materials to achieve high student involvement in seeking sound and practical solutions to the major environmental problems which face us today.

Unit content is varied and includes comprehensive coverage of the topics of solid waste and sewage treatment, and air, water, thermal, marine, seashore and urban pollution. In other units pupils are actively involved in the critical environmental problems of open lands, wildlife, wetlands preservation, energy conservation, resource management, and community response – all presented in scientifically accurate and socially responsible settings. Each multi media instructional kit provides a variety of pupil centered, hands-on, problem solving activities. The kits include: illustrated student booklets which relate new ideas to the students' own experiences; students investigations which provide first hand experience with pollution and pollution control processes; spiritmasters, experiment sheets, and activity cards enabling a teacher to individualize instruction for specific needs and interests; audio-visuals for pupils to observe phenomena which cannot be duplicated in the classroom; filmstrips and film-loops, overhead transparencies, and audio cassettes to aid class discussions of important ideas. A comprehensive teachers' guide coordinating all of the elements of a kit enables a teacher to handle the program without specialized training. It contains an outline of the basic objectives of the unit in terms of "attitudes and values, knowledge and skills," a convenient chart for scheduling the unit's work, and tests based on the material covered in the unit. Each kit is designed to be taught as a one or two week unit. (Their contents are described below under materials.)

The secondary school program is appropriate for inclusion in regular science, health and social studies classes as well as in urban studies or environmental science. The elementary grade program is designed for effective use by the regular classroom teacher.

Validated in 1974, the elementary grade programs were endorsed for national dissemination by the Dissemination Review Panel of the United States Office of Education and are used by school systems throughout the country. The secondary school programs were validated in

1975 and approved for national dissemination in 1976. As of early 1978, this project was serving 9,600 students in 215 schools in 32 states, Puerto Rico, Micronesia, Europe, and Canada.

ESSENTIAL ELEMENTS OF THE PROGRAM

The program's use in another district is defined by inclusion of one or more units of study in the curriculum.

GOAL AND RESULTS

Goal: Students in the program will increase their knowledge of topics related to controlling pollution of the environment.

All classes selected contained heterogeneously assigned pupils. Experimental classes received instruction using the project materials. Two types of control classes were established: Control Group A, was given the pretest and posttests and received instruction in the same subject matter as the experimental group, through commercial and trade materials from a variety of publishers, but not the project materials. Group B, was given only the pretests and posttests and was not given instruction on the subject matter. The tests were criterion-referenced, developed by the project staff, and related closely to the instructional objectives upon which the units were based.

Results: For all the elementary units, the experimental *Priority One* groups scored significantly higher than both A and B control groups. For the four *secondary* units, again the *Priority One* groups scored significantly higher on their post tests than did the control groups.

The project was demonstrably effective. Students using project materials learn significantly more about pollution control than students receiving traditional instruction in the same subject matter, but not using the project materials. In addition to the test results, consistent reactions from the teachers and the students using *Priority One* materials indicated that the pupils learn new concepts which they did not know before and which are not now part of their out-of-school experiences. Furthermore, non-test responses and actions of participating students indicate a higher commitment to positive environmental attitudes, a further indication that the instructional objectives were achieved.

REPLICATION

Materials: The elementary grade units developed by the project staff have been published as "Priority One: Environment" and are available for purchase from McGraw-Hill, Webster Division at prices ranging from $85 to $135 per unit or $.20 per child.

Recommended for Grades 1, 2, and 3 (published spring 1974):

Priority One: Environment Level 1
Priority One: Environment Level 2
Priority One: Environment Level 3

Recommended for Grades 4, 5, and 6 (published spring 1973):

Air Pollution	Marine and Seaboard Pollution
Solid Waste Management	Thermal Water Pollution
Water Pollution	The Great Swamp

The four secondary units are available at cost ($60 per kit) from the Pollution Control Education Center (less than $.15 per student). They comprise the following:

The Energy Challenge explores the present patterns of energy consumption, the potential use of solar, nuclear, and geothermal energy, and techniques for conserving energy, with attention given to the controversy on radio-active waste disposal and to the hope that controlled fusion reactions can be a significant energy resource.

Protecting Our Water Supplies introduces students to the many ways water is used and abused by Americans. A case study of Lake Tahoe illustrates the damaging effects of water pollution, the complex interactions of land and water use, and the political, economic, social, and technical factors involved in planning and implementing sound water management.

Air Pollution and Your Health explores the chemistry of air pollution and its relationship to human health; examines controversies concerning implementation of the Clean Air Act and the future of the automobile; and studies the effects on the body's systems of polluted air and the more general threats posed to the public health.

Open Lands and Wildlife features three comprehensive filmstrips on wildlife and provides students with data for studying the wildlife that inhabits parks, lots, or open lands in their own vicinity. The unit introduces ecological principles as they relate to wildlife populations, problems of endangered species, and wildlife management controversies.

Training: The program is funded as a demonstration site. Staff training, though not mandatory, is highly recommended; a half-day program is successful for either the elementary or secondary program. If staff training is not desired, a thorough review of teacher/student materials should provide sufficient orientation to implement the program. The use of any one unit by one or more teachers is considered an adoption. Follow-up consultation is provided. Sites of the training and consultation are arranged on an individual basis for each adopter. No special staff is required.

COSTS

Of implementation: These relate to purchase of the units and to a minimum level of staff training (1/2 day). Each secondary unit costs $60 (or $.15 per student), can serve several classes, and contains all essential materials needed for 30 students. No special equipment or facilities are necessary, assuming the availability of tape recorders and overhead and film projectors.

Of maintenance: Estimated replacement costs over a four-year span average $.25 per student for the special workbooks.

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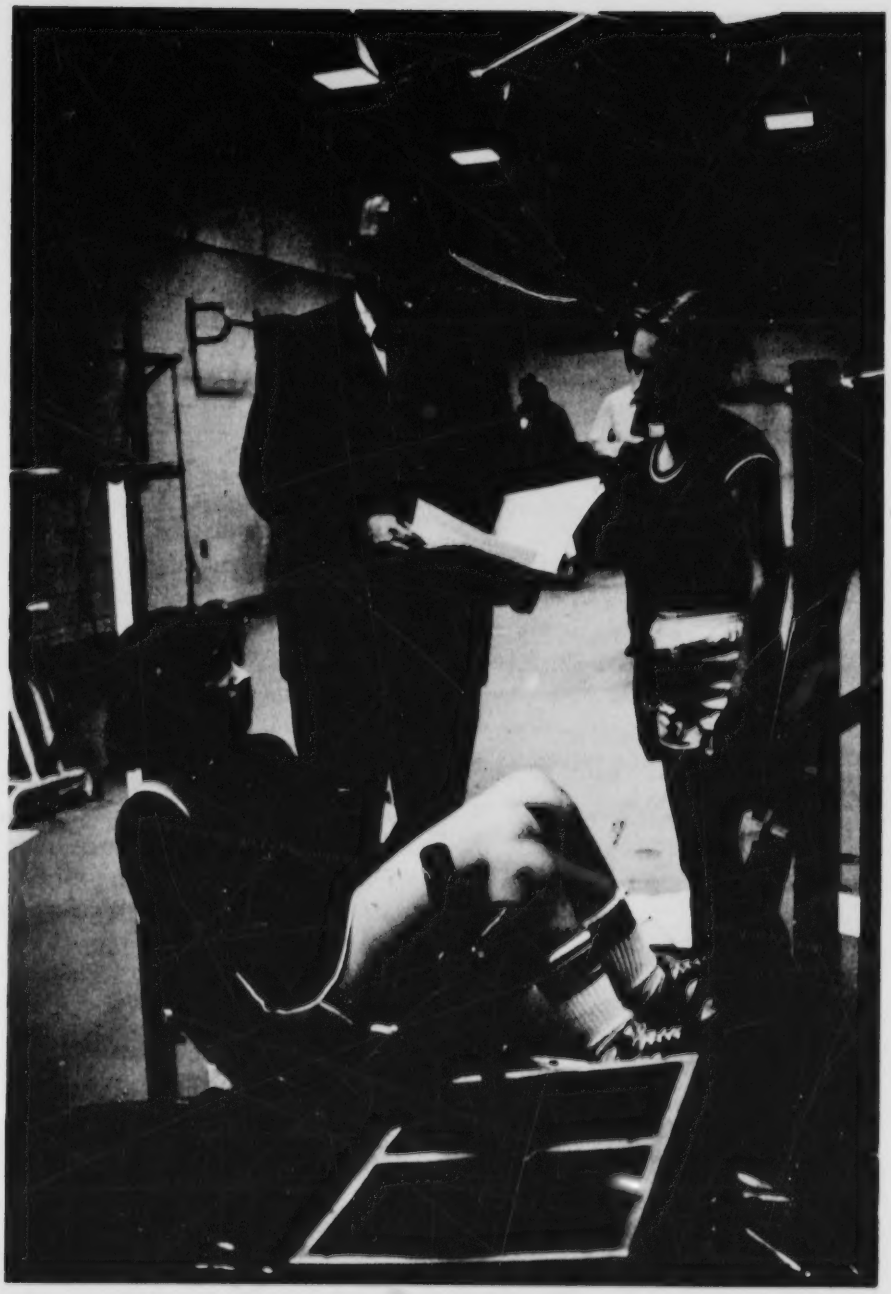
Special Education



Special Education
Grades K-12

PROJECT ACTIVE: ALL CHILDREN TOTALLY INVOLVED EXERCISING

Oakhurst, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

Project ACTIVE is designed to meet the widespread need for individualized-personalized physical activity programs for handicapped children. The project staff trains teachers of special education, physical education, and recreation to prescribe individualized-personalized activities for children from prekindergarten through grade 12, evidencing low motor ability, low physical vitality, mental retardation/learning disbilities, postural abnormalities, nutritional deficiencies, breathing problems, motor disabilities/ limitations, communication disorders or visual/auditory problems. Although developed to serve handicapped children, the program is equally applicable to slow learners and normal and gifted children.

Specifically, ACTIVE offers: (1) a training program to provide teachers with those skills/strategies necessary to implement an adapted physical education program; (2) diagnostic-prescriptive curriculum manuals and materials addressed to the entire gamut of handicapped conditions; and (3) consultant services to assist implementers during the installation phase. Program strengths include: (1) extreme flexibility for adoption/adaptation; (2) a total curriculum package that can be implemented immediately at minimal cost; (3) compliance with the federal mandate requiring "written education programs for the handicapped population"; (4) the provision of unlimited support services (at no cost) to enhance successful implementation; and (5) accountability features to enhance administrator/community support. Student instruction is based on individualized-personalized teaching/learning strategies. Teacher training uses a competency-based instruction format (i.e., the program is structured to ensure that the trainees acquire the skills, knowledges, attitudes stressed), with emphasis on trainee exposure to handicapped individuals in a field setting. Participants are trained to diagnose and assess pupil strengths and deficiencies, and to prescribe motor, perceptual, and physical fitness tasks accordingly.

The program was developed under an ESEA Title III grant, in response to legislation mandated to provide physical education programs for all handicapped children. In 1974

and 1975, the competency based teacher training program and other program components were validated and approved for national dissemination by the Dissemination Review Panel of the United States Office of Education. As of 1978, this project was serving 34,000 students in 288 schools in 25 states. The program is also included in courses of 16 colleges and universities, and 11 satellite sites have been established throughout the country to handle orientation, training and follow-up consultation.

ESSENTIAL ELEMENTS OF THE PROGRAM

A replication of Project ACTIVE is defined by the following instructional requirements and implementation options:

Instructional requirements:

- two classes per school
- sixty minutes of instruction per week (two or three instructional periods)
- sixteen weeks per year
- utilization of the individualized-personalized ACTIVE learning process

Implementation may be in any one or a combination of these areas:

- Low motor ability
- Low physical vitality
- Nutritional deficiencies
- Postural abnormalities
- Breathing problems
- Communication disorders
- Motor disabilities or limitations

GOALS AND RESULTS

Three objectives relate respectively to teachers and students.

Goal #1

All public/private school physical education teachers participating in the training program will demonstrate proficiency in providing individualized-personalized physical education programs for handicapped children in their respective schools. The minimum level of performance will be the ability to perform 80% of the competencies (20 of 25) listed in the Teacher Performance Chart.

Eighty teachers trained in 1973-74 were pre- and post-tested by project staff on the locally developed Teacher Cognitive-Psychomotor Test. All eighty teachers achieved the 80% level of mastery (20) on the twenty-five competencies, indicating goal achievement.

Goal #2

Students with motor response problems, or handicapping conditions, who are prescribed motor activity programs commensurate with their individual needs for a minimum of sixty minutes per week will achieve motor performance scores significantly superior to students who participate in traditional physical education, plus classroom activities, or solely classroom activities during comparable time periods. [handicapping conditions are defined as

mental retardation (educable), perceptual impairment, neurological impairment, or emotional disturbances. Traditional physical education is defined as participation in individual, dual, or group games which do not consider the needs of each child.]

Three research studies were conducted in 1973-74. The subjects in the experimental groups were matched on the basis of age, sex and pre-test Motor Ability Indexes. Both the experimental and control groups were pre- and posttested over a six-month period of time via the Township of Ocean Motor Ability Test.

Results supported the conclusions that physical education activities prescribed on the basis of individual needs will improve:

- the motor ability performance of students evidencing low motor ability, mental retardation, neurological impairment, perceptual impairment, or emotional disturbance.
- The gross body coordination, balance/postural orientation, eye/hand coordination, eye/hand accuracy, and eye/foot accuracy of students evidencing low motor ability.
- the gross body coordination, balance/postural orientation, and eye/foot accuracy of students evidencing mental retardation, neurological impairment, perceptual impairment, or emotional disturbances.

Goal #3

Students with handicapping conditions who are prescribed physical activity programs commensurate with their needs for a minimum of two thirty-minute, or three twenty-minute periods per week will achieve psychomotor performances scores significantly superior to students who participate in traditional physical education, plus classroom activities or solely classroom activities.

All subjects were matched on the basis of age, sex, handicapping condition and pre-test scores. Both experimental and control groups were pre- and posttested over a four to six-month period in 1974-75. The following results were statistically significant in favor of individualized instruction:

- Four of the five physical fitness studies.
- The two nutritional studies.
- The two posture studies.
- The breathing problems study.

Thus, nine of the ten analyses revealed that individualized instruction was superior to group instruction in the attainment of psychomotor skill development.

REPLICATION

Program installation is flexible; it may be implemented in one class, a school, or an entire district. Seven discrete curriculum components enable the district to adapt the program to students with varying abilities in grades pre-K through 12.

Materials: The following staff-developed materials are available at cost:

- *Compentency-Based Teacher Training Manual* – an effective method for providing teachers with the minimal competencies needed to implement an individualized physical activity program for handicapped youngsters. $7.50
- *Low Motor Ability* – guidelines for developing an individualized motor ability program focusing on early intervention, all levels of mental retardation, learning disabilities, and normative data for assessing performance. $6.00
- *Low Physical Vitality* – a sequential approach to individualizing and personalizing the physical fitness program; includes normative data for assessing performances. $4.00
- *Nutritional Deficiencies* – an activity and nutritional program for children severely malnourished, either obese or underwieght. $4.00
- *Postural Abnormalities* – format and content for implementing a body mechanics program; includes guidelines for working closely with the family and/or school physician and the school nurse. $4.00
- *Motor Disabilities or Limitations* – a structured procedure for individualizing and personalizing a motor activity and physical fitness program for students with varying physical disabilities. $4.00
- *Communications Disorders* – individualized and personalized approach to instituting a motor and physical fitness program for students who are auditorily handicapped, autistic, or aphasic. $4.00
- *Breathing Problems* – a sequential approach to programming children with asthma, emphysema, or cystic fibrosis. $4.00
- *ACTIVE Administrator's Guide* – guidelines and strategies for organizing and administering the program. $4.00
- *ACTIVE Teacher Resource Manual: State and National Sources and Services* – sites, contact persons, products and services for teachers of the handicapped. $6.00
- *ACTIVE Motor Ability/Physical Fitness Norms Manual* – New Jersey and national norms based on chronological age (normal population) and mental age ("classified" population); includes simplified procedures for establishing local norms. $7.50
- *ACTIVE Research Monograph* – research studies related to the individualized-personalized effort, with implications for programming and subsequent research. $4.00
- *Motor Ability Duplicating Masters* $1.00
- Duplicating masters of all other test/administrative forms $3.00
  Both packets, when used together, enable the teacher to diagnose, prescribe, and evaluate the motor/physical performances of all handicapped students.
- *Prescription Reinforcement Strategy Duplicating Masters* – enable teachers to reproduce 24 motivational cards reinforcing positive pupil behavior, and involving parents. $1.50
- Filmstrips: *Teacher Training* – gives a step-by-step explanation and demonstration of the teacher training process. *Motor Ability* filmstrip emphasizes the individualized-personalized teaching-learning process as used in the motor ability component. $5.50 each

– Project ACTIVE films: *"The Hidden Handicap"* presents an overview of the problems of the learning disabled child. *"A Child Involved"* highlights the values derived from a physical activity program for the handicapped; is designed for the general public. Both films may be borrowed free of charge.

Other materials, free of charge, include a technical brief, monthly newsletter, fold-out program flyer, and parents' brochure.

Training: Inservice staff training is essential and is provided free of charge, funded through Title IV-C and the National Diffusion Network. Training programs are adapted to comply with the needs of the teachers and schools. Existing personnel can be used to obviate the need for additional staff, by including the ACTIVE program in the special education curriculum, or using team teaching. Various training options are offered:

- mini-training to implement the motor, perceptual-motor, and physical fitness components
- maxi-training for implementing the total program
- a refresher course to update ACTIVE-trained teachers in new program strategies and instruments
- an administrators' course
- one-day clinics

Extensive follow-up services are provided. Adopter districts receive the following supplementary materials and services free of charge: monthly issue of the ACTIVE Newsletter, resources tasks and activities packets, certificates of Achievement for each handicapped child, individual time prescriptions (motor, physical fitness and posture), statistical analysis of pre-post data, assistance in establishing school or district norms and assistance in conducting research studies, and other consultant services as requested.

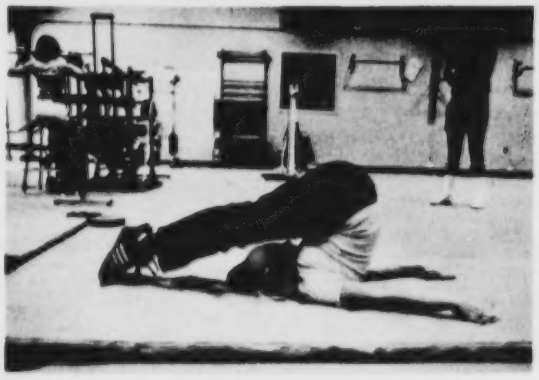
COSTS

Of implementation: These include costs for inservice teacher training and purchase of the following program materials and equipment:

Motor Component		All Components	
Supplies	$5.00	Supplies/equipment	$500.00
Motor Model Kit	$21.50	Total Model Kit	$41.50

Regular physical education equipment can be used. Cost varies from $50 to $300 depending on available equipment, averaging $9 per student, including one staff member, or $5 without the additional staff.

Of maintenance: No extra costs.



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Special Education
—Learning Disabilities
—Remedial Reading
Grades 7-12

THE COMMUNICATIONS WORKSHOP (CWS)

Teaneck, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

Communications Workshops is a cross-age teaching program, grades 7-12, primarily for perceptually impaired or learning disabled students, appropriate not only for students qualifying for compensatory or supplemental instruction, but also for non-classified students, deficient in reading and several years below grade level. Designed to improve the quality of Basic Skills instruction afforded learning disabled students, CWS provides a balanced curriculum which is both structured and student centered, using material consistent with student interest and capacity.

These students spend about 2-1/4 hours at an open-classroom, central location and the remainder of their studies at the high school, junior high school, work-study or satellite programs. Together with team teachers, they design goals that reflect their personal interests and needs, and are provided the freedom to learn in an informal, relaxed atmosphere. This "human" approach, tempered by the program's well designed motivation strategies, intervention strategies and classroom monitoring systems creates a subtle yet effective structure providing for teacher and student accountability.

A critical feature of the innovative program is that the process of reading is viewed as the focus of social studies and English. Thus, all content area instruction emphasizes *reading* which had heretofore been a source of failure and frustration. For participation in the Communications Workshop, students receive fifteen credits in three subjects including reading, English and Social Studies.

The program was developed by local district funding for 5 years, given a one year ESEA Title IVC validation grant, validated in October 1977 by the N.J. Department of Education, and approved for national dissemination by the Joint Dissemination Review Panel of the

U. S. Office of Education in June 1978. It is operating as a national Developer-Demonstration site, available to visitors by appointment.

ESSENTIAL ELEMENTS

- Individualized, Cross-Age Teaching
- Personal, Human Philosophy
- Activities Monitoring System
- Program Monitoring System
- Student Motivation Strategies
- Intervention Strategies
- Functional Vocabulary and Spelling System
- Functional, Retrieval Word Attack System
- Organization of Reading Staff and Materials

GOALS AND RESULTS

Goals comprised both cognitive and affective areas.

Goal #1

Cognitive: Reading growth of CWS students classified as perceptually impaired or learning disabled will increase significantly in vocabulary knowledge and reading comprehension.

In reading comprehension, the average student in the program learned at a rate 5.52 times faster than his or her rate of learning prior to entering the program. In vocabulary knowledge the average student in the program learned at a rate 5.66 times faster than his or her rate of learning prior to entering the program. The learning ratio is a way of taking into account the fact that these students are hard-core resistant learners who have not responded to instruction over the years despite the application of a variety of techniques.

Goal #2

Affective: In 1976-77, CWS students classified as perceptually impaired or learning disabled will improve in self-concept and attitude toward school, and will maintain their levels of psychological health and self-concept.

Findings exceeded the stated objectives as follows:

- CWS students were involved with significantly fewer "disciplinary referrals", "suspensions" and "requests for program changes", than their peers in the same grades in Teaneck.
- The self concept and attitude toward school of the CWS students, as measured by the Piers-Harris Children's Self-Concept Scale and the I.O.X. School Sentiment Index were not merely maintained at the same level, but were raised to a significantly higher level by the close of the school year.
- As measured by the Thematic Apperception Test, the students not only maintained their average level of psychological health, but raised it significantly by the close of the school year.

REPLICATION

The Communications Workshop's carefully designed curriculum and its step-by-step approach to implementation enable any school district to adopt the program's strategies, approaches and monitoring systems with little difficulty.

Materials: All project materials are provided at cost as follows (prices to be determined).

- Technical Brief - No Charge
- Teacher's Program Guide - (Approx. 200 p)
- Activity Monitoring System Manual for classroom management - (Approx. 175 p)
- Program Monitoring System Manual for classroom management - (Approx. 100 p)

For facilities, a nearby off-campus setting is preferred which should maintain an informal, open atmosphere, with classroom furniture that permits freedom of movement. One or several units may be implemented, depending upon need. One unit services approximately twenty-eight students.

Training: Project staff offer complete and extensive training programs to adopting school district free-of-charge, plus follow-up consultations and assistance in evaluation and planning. Personnel necessary to the program include: one full-time teacher who must be a skillful and resourceful reading teacher, capable of individualizing instruction, with a humanistic attitude toward teaching; and two part-time supplemental teachers, who complement this style of teaching. If students in the program are to be classified as perceptually impaired, teachers must be properly certified. Visitors are invited to observe the CWS classroom in progress and view project materials. The Project Directors are also available for workshop presentations upon request from interested districts.

COSTS

Of implementation: The total start-up, operational and management cost of replicating the Project per learner is $29.17, based on the following: (a) the adopting school has a full-time reading teacher in its employ; (b) two supplemental teachers (or aides) are available three hours each day, and (c) some basic materials are available, such as workbooks, paperbacks, tape recorder, record player, Language Master and headsets.

Of maintenance: Minimal, assuming the continuance of staff personnel.

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Special Education
Grades 6-12

ESSP
EDUCATIONAL SERVICES FOR SCHOOLAGE PARENTS

New Brunswick, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

This program was developed at New Brunswick's Family Learning Center to provide educational, nutritional and social services for pregnant students. Pregnant adolescents and their offspring are high risk individuals . . . emotionally, medically, and socially. Pregnancy is the greatest single cause of females dropping out of school. The children of adolescents are more likely to die in the first year of life than those of any other age group; they are usually of lower birth weight (less than 5.5 pounds); and more likely to grow into children with low I.Q.'s, perceptual and motor disturbances, and speech problems than are babies of higher birth weights. Pregnant teenagers often have an academic history of poor motivation, excessive absence, and truancy. Their educational prognosis is, therefore, usually poor.

Initiated in September, 1969, the Family Learning Center has served an average of 53 students per year, with 25-40 students enrolled at one time. Students come from grades 6 through 12, are enrolled as soon as a doctor certifies they are pregnant and the parents have given permission, and remain in the program for six weeks after returning from a 2-to-3 week maternity leave.

Girls in the program are given instruction in three areas:

1. *academic subjects* – a highly individualized instruction which continues, as closely as possible, the subjects the girl has been studying; classes are small and instruction individualized.
2. *family life education* – includes instruction in nutrition, food preparation, sewing, consumer economics, etc.; daily preparation of breakfast and lunch is an important component.
3. *maternal and child health* – anatomy, human reproduction, growth and development, heredity, hygienic and dietary habits, techniques of labor.

The Center also provides *health* and *counseling* programs for the students. The *health* program includes pre-natal care by a hospital out-patient clinic or private physician, post-natal consultation by pediatricians employed by the Center, and a breakfast and lunch program where students apply the facts they have learned about nutrition and food preparation. The *counseling* program covers the initial orientation visit to the family of the teenager; an abbreviated case study of the student; group counseling sessions with the students (topics include the role of the father, the father's rights and obligations, the feasibility of future dating, their role as mother, theories of child raising, and the emotional and practical problems of returning to school); and facilitation of the students' communication with appropriate agencies (childcare, psychiatric service, marital and family counseling for fathers who want this service).

After delivery and a two week maternity leave, a student may continue her class at the FLC for six weeks before she is returned to the regular school. She, the other girls, and the new infants gain a great deal from this period of adjustment with the support and guidance of the staff. Eighty-nine percent return to regular school and graduate with their class. Prior to 1969, none did.

Services of the district's entire special education staff are used as needed, and close contact is maintained with many community agencies to obtain services needed by students, but not available within the program.

Developed through an ESEA Title III grant, the program was validated in 1973 and endorsed for national dissemination in 1974 by the Dissemination Review Panel of the United States Office of Education. It is now fully supported by the New Brunswick Board of Education as part of the district's total special education program, with assistance from students, their parents, educators, advisory councils and various community agencies and organizations.

ESSENTIAL ELEMENTS

The program's replication in another site is defined by (1) instruction in the three areas of academic subjects, family life education, and maternal and child health, including the lunch program; and (2) availability of health and counseling services of pregnant students.

GOALS AND RESULTS

The project had three major objectives:

Goal #1

Student participants will show a dropout rate significantly lower than that for pregnant students in the district prior to the beginning of the program.

In the seven years before the program 126 girls known to be pregnant dropped out of school and an alternate program of home instruction was provided. In the four years of the program, September, 1969, through June, 1973, of the 177 girls who participated in the program, only 19 have dropped out of school, a highly significant difference in number of dropouts. Thus, the program has succeeded in keeping girls in school and enabling them to attain their high school diploma.

Goal #2

Babies born to participants in the program will be significantly healthier than the State's norm for babies born to adolescent women.

"Healthier" was defined as having a birth weight of 5.5 pounds or higher. The goal was measured by determining proportion of babies of low birth weight for both New Brunswick and the State as a whole to determine if there was a significant difference.

Of the 177 babies born to students during the four years of the program only one baby was of low birth weight, (the mother had leukemia). The data clearly shows that the incidence of low birth weight babies is significantly lower in the New Brunswick program than in the state or nation.

Goal #3

Project students will increase their knowledge of family living.

This goal was evaluated by individual pre-post testing of student's knowledge, through visits by the staff nurse and social workers, and by consultations with community counselors. All indicated increased student knowledge and preparation for their new responsibilities.

In summary, the project is effective in increasing the percentage of "healthier" babies delivered to adolescent students; in sharply reducing the drop-out rate and improving academic achievement; and in increasing student knowledge of family planning.

REPLICATION

Materials: Project staff and consultants have prepared the following materials, available at costs:

– Technical Brief Brochure – brief description of project	Free
– ESSP Resource Manual for Administrators and Teachers A detailed description of the Educational Services for Schoolage Parents program	$4.00
– Filmstrip-tape: Educational Services for Young Parents – Organization and Curriculum	$15.00 - purchase $6.00 - rent
– Nutritional Guidelines Necessary in the Implementation of Programs for School-Age Parents	$2.00
– Long Term Effects of a Nutrition Education Program for Adolescents as measured by a New Nutritional Analysis System	$2.00
– Significant Aspects of Maternal and Child Health in a Program for Schoolage Parents	$2.00
– Evaluation of a Program to Provide Educational Services for Schoolage Parents	$2.00
– So We Were Pregnant! – Significant case histories of schoolage parents	$2.00

- Prelude and Prologue – An overview of our changing times in meeting the challenge of the tremendous upsurge in schoolage pregnancy $2.00
- The Psychological Needs of the Pregnant Adolescent $2.00
- Schoolage Girls and the Law $2.00
- Financing Programs for Schoolage Parents $2.00

A variety of available curriculum material is used for basic junior and senior high school courses, as well as locally developed information and pamphlets. All are listed in the Resource manual. The only physical features essential for the program are the facilities for the students to prepare their own breakfast and lunch. Required equipment includes kitchen utensils, basic medical diagnostic equipment (scale, stethescope, examination table), and basic baby furniture (crib, playpen, etc.).

Training: Visitors are welcome by appointment.

Before implementing the program, a district should allow one week of preparation in the summer for staff members: Director of Pupil Personnel Services, nurse, community counselors, home economist, homemaking specialist, teachers, etc. Training is provided by the ESSP staff in a 3-day summer workshop at the Family Learning Center in New Brunswick. This follows a one-day orientation session held during the academic year.

COSTS

Of implementation: Start-up costs depend upon available facilities and materials in the district. Most high schools have home economics rooms adaptable for the program, and many churches have the necessary facilities.

Of maintenance: Operational costs are two-fold, comprising staff salaries and the breakfast and lunch program. In New Jersey, 50% of the salaries for the program are reimbursable under the Beadleston Act and $.20 per student per day reimbursable under the State's School Breakfast Program. The National School Lunch Program reimburses the district $.66 per student per day. The total per pupil cost for operating the program is $1,298; with the above reimbursements, the per pupil cost to New Brunswick is $613.

Since New Jersey law requires schools to provide five hours of educational instruction per week to each student unable to attend school because of pregnancy, the per-pupil maintenance cost of the program is no higher than that of home instruction formerly provided, thereby enabling New Brunswick to maintain the program with its own funds. Teachers may be drawn from the regular staff.

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Special Education
—Trainable Mentally Retarded
Grades 1-Adult

THE ELSMERE PROJECT

Glassboro, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

The Elsmere Project is a vocational program which prepares the trainable mentally retarded students to become functional working citizens in the community by providing them with job tasks and experiences to increase their independent living skills.

Traditionally, most of the trainable mentally retarded have been denied opportunities for productive roles, housed in protected environments, and offered programs of little more than kindergarten-primary level. Accordingly, they reach adulthood with slight sense of their own dignity, potential and independence. This project is an effective alternative, using all factors to achieve an optional level of employment and mainstreaming them into society as contributing members of the work force.

Upon entering the program, students are tested by the School Psychologist to determine their levels of training ability and then provided with an individualized educational program reflecting five essential skill areas:

- Functional academics
- Socialization
- Independent Living
- Pre-vocation
- Vocation

Through these five areas, the student is prepared to function in the community; to travel, shop, work, enjoy leisure time and relate to others. Each subject is taught by a different instructor, and all students move from class to class throughout the day. Groupings are not by chronological age, but by functioning ability, as determined by the Glassboro Trainable Assessment Profile (GTAP).

A special environment within the school trains them for jobs in industry and business. They are exposed to a simulated work experience in a simulated classroom company, where they punch a clock, take breaks and lunch, receive an hourly monetary reward, and produce a finished product. Training is stressed in the areas of assembly line activities (stringing beads,

nuts and bolts kit), packing (plastic animals, balloons, tableware), and collating (home-made material, calendars, etc.). Students' original material is utilized, such as a yearly calendar designed, printed, and collated by the students. Assembly line positions are taken, with each child's expected abilities assessed and rewards proportionately given in relation to expected productivity. After receiving monetary rewards earned from job experiences, the students participate in a banking day in which they travel to the banks, learn procedure, and decide what to do with their money.

Community and parental involvement are integral components of the program. For the more accelerated, on-the-job training and student job placement occur through the cooperation of local business leaders who are potential employers of Elsmere Project graduates. In addition, local advisory groups and service organizations assist the Project by advising on the types of skills necessary in preparing students for actual employment. Parents participate in their child's training and vocational learning by encouraging them to perform activities at home that reinforce the vocational skills taught at school. A "Parent Council" functions as collaborator, performing tasks that enhance the probability of student success.

The program was developed over a three-year period 1974-77 through an ESEA Title III-IVC grant. It was validated by the New Jersey Department of Education in October 1977, and is preparing application to the Joint Dissemination Review Panel of the U.S. Office of Education for approval for nation dissemination.

ESSENTIAL ELEMENTS

- Cooperative team of staff members trained in the program and in behavior modification.
- Ability grouping, with the Glassboro Trainable Assessment Profile (GTAP).
- Application of individualized program for each student.
- Vocational training in the basic skills in five subject areas: academics, socialization, independent living, pre-vocation and vocation.
- Simulated work experiences in a simulated classroom company.
- Community and parental involvement as integral components.

GOALS AND RESULTS

Each student will demonstrate significant progress in functional academics, socialization, independent living and vocational skills necessary for employment habilitation as evidenced by:

a. the change in skill levels as measured by the Glassboro Trainable Assessment Profile (GTAP);
b. placement in competitive employment settings;
c. placement in settings designed to provide additional training.

The GTAP was administered to the Elsmere population on a pre-post basis over a two-year period. Data analysis indicated significant student gain in 25 to 40 areas measured. In addition, a random sampling of Elsmere students was matched to control group students enrolled in traditional educational programs. The Elsmere group scored significantly higher than the control group in seven of 15 areas measured. Of the students who have graudated

from the Elsmere Project, 40% have been hired as sheltered employees, 40% are receiving additional training, and 20% are attending activities centers.

REPLICATION

Materials: Manuals developed by the project staff are available to adopters at cost:

- Community Involvement Guide 1.50
- Behavior Modification for the Trainable Mentally Retarded 3.00
- The GTAP (Glassboro Trainable Assessment Profile) 1.50

Currently in development are:

- Guide to Project Implementation
- List of Behavior Objectives in an Individualized Eduation Program
- 3 Component Guides to Community Involvement
  - Parent Support Manual (for Parents)
  - Parent Training Manual (for Teachers)
  - Guide for Prospective Employers

A technical brief and descriptive brochure are available free of charge.

Training: Prior to project implementation all staff members involved in adoption plus one administrator should receive training in: the utilization procedures for the GTAP; curriculum; on-the-job training; parent participation aspects of the Elsmere Project; and, if possible, behavior modification. Parents should be trained by the teaching staff after suitable instruction is given them. The staff necessary for project implementation is determined by the number of students to be served. As the curriculum includes five subjects, optimally five classroom teachers would be needed, one teacher for each area of instruction; for a small student population, one teacher could teach more than one subject area. A staff member must function as on-the-job training instructor to supervise students at on-site training and to solicit employment sites for students.

The project staff conducts a 5-day training workshop in the five project components, and provides follow-up consultations to adopters, free of charge.

COSTS

Of implementation: These vary according to the materials, supplies and resources available in the district. The costs below are those actually incurred by Elsmere School in installing and maintaining the Project for 50 students:

	Start Up (non-recurring costs)	Operational (recurring costs)
Personnel training	$1,500.00	
Equipment & Material	$4,700.00	
Release time for Diagnosis	$ 500.00	$500.00
Total	$6,700.00	$500.00

Of maintenance: Minimal, except for teacher release time for diagnosis, two hours per student, estimated at $500.

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Special Interests

Affective Education
Management
Teacher Training
Other curriculum areas

Special Interest
—Alternative School
—Basic Skills
—Career Education
Grades 9-12

ALTERNATE LEARNING PROJECT (ALP)

Providence, Rhode Island

OVERVIEW, DEVELOPMENT AND RATIONALE

Project ALP, a community-based alternative high school program, provides students with an individualized basic skills program, a college preparatory course, career exploration activities, and a broad arts program.

The program arose from community dissatisfaction with traditional secondary education, generated by an increasingly high dropout rate, declining attendance, frequent complaints about course offerings and guidance services, and increasing student interpersonal and intergroup tension and unrest.

Plans for the ALP program were initiated in 1969-70 by a group of parents, students, and school department personnel interested in creating a school which would offer an alternative for high school students and address the pressing educational problems. Funded by an ESEA Title III grant and matching funds from the Providence School Department, the program was initiated in September, 1971, in a reconverted bowling alley in downtown Providence, with 50 students. With its enrollement now stabilized at 125 students, the emphasis is on continous personal counseling and student responsibility. Students enroll in ALP by choice. Applications are selected by lottery, using such factors as race, family income, sex, and grade level to achieve a population reflective of the city and school system profile. Approximately one-third of ALP students are from families at or below the poverty level. Their previous school records range from excellent to failing, and at least 12% have previously dropped out of school.

Although the program has changed, the basic objectives still stress the cognitive and affective areas: to provide basic verbal and math skills as well as career education and counseling for student employment: to improve career-decision making skills, self-confidence and competence; to increase awareness of, and participation in, the services, professions and activities of the surrounding community.

The ALP school year is divided into four eight-week quarters, each quarter followed by a one-week evaluation period, during which students meet with their counselors, review their course work, and choose new courses from the 80 classes at the ALP school and from 50 site placements available in the community. These include: basic skills; projects; advanced academics - math, science, history, languages, literature, psychology; visual arts; and performing arts. Students may take courses for credit and audit at nearby colleges or the

traditional high school, and may work in community professional settings. They may take many or few courses; concentrate on a specific goal or diversify their activities; prepare for college (approximately 65%), or seek apprenticeships which will give them marketable skills upon graduation. Some students return to the traditional high school environment; however, the dropout rate from the ALP school program is close to zero.

With no required courses, graduation requirements involve: (a) ALP Life Skills Competency Assessment, an evaluation of individual student competencies in practical, real life situations, where applied performance is required; (b) ALP Core Diploma requirements. Students must pass proficiency exams in English, math, science, and U.S. history; and must complete a minimum number of courses and educational activities (22 credits).

There are no grades; but at the end of each quarter, students and teachers complete a written evaluation for every course or project undertaken. Despite its gradelessness, its record of students' college acceptances is noteworthy.

The core ALP staff includes a director, a program assistant, a community liaison, and five teacher-counselors who meet regularly and are certified in at least one subject area. Core staff responsibilities include: clerical and administrative duties; teaching; academic, personal, family and employment counseling; project coordination; and facilitating student activities in the surrounding community. Part-time teachers, specialists, college student interns, parents, and community volunteers also participate in the program.

Students engage in all aspects of the program: they shape their own programs of work and study; aid in decision-making on all matters including staff hiring, budget, curriculum development, and future strategy planning; meet with parents and ALP staff on a quarterly basis; and serve on the Governing Board (weekly meetings).

The program was validated in 1974 and approved by the Joint Dissemination Review Panel of the U.S. Office of Education for national dissemination. In 1973 it received the Educational Pacesetter Award from the National Advisory Council on ESEA Title III programs.

ESSENTIAL ELEMENTS

- An alternative school strategy with student participation in all phases of school organization and activity.
- Curriculum content stress on basic skills, career education, vocational placement, in diverse offerings at diverse places.
- Program year structured into four eight-week quarters, each followed by a one-week evaluation period.
- No grades, but specific graduation requirements.
- Parental involvement in all school aspects.
- Wide community involvement and use of its physical and human resources.
- Separate facility or location within school for alternate program.

GOALS AND RESULTS

Major objectives of ALP are: (1) to improve student performance in basic skills; (2) to improve student career-decision-making skills; (3) to provide needed counseling for planning,

and support of student activity; (4) to involve students and parents in school governance and decision-making; (5) to maximize learning opportunities in the community; (6) to foster student confidence and self-assurance in dealing with daily situations.

Tests used were the *Test of Academic Progress* (Reading and Math), Scholastic Aptitude Tests (SAT) and Preliminary Scholastic Aptitude Test (PSAT) – in both of which college bound ALP juniors and seniors scored significantly higher than national norms. All 33 college-bound ALP students graduating in 1974 were accepted at 4-year colleges or universities (half coming from families with incomes less than $6,500 per year).

Tests for the affective area, the IOX School Sentiment Index and the Self-Acceptance Scale, indicated more positive attitudes in ALP students than in nonparticipants. External evaluations of ALP have shown that the project has greatly reduced absenteeism and dropout rates. Sixty-five percent of ALP students have gone on to four-year colleges; many of these students normally would not have purused further education. Other measures have shown improved attitudes toward self and schooling.

REPLICATION

Special Focus Programs developed by ALP for adaptation include: (1) Career Education through Community Resources (2) Competency-Based Education and Basic Skills (3) Family Life Peer Counseling Service (4) ALP Child Care Center (5) College Local Educational Agency Relationship (CLEAR) Program (6) Transitional Program for Special Needs Students (7) Curriculum Development (8) Organization and Fiscal Management for Alternate Education (9) Governance and Parent Participation.

The scope of the ALP program allows for a variety of adoption possibilities, ranging from the full ALP program, to one or more of the "ALP Special Focus Programs." Adoption of the total program involves: (1) staffing at school district teacher/pupil ratio; (2) training for adoption staff at local site (minimum three days start-up training); (3) designation of separate facility, or location within school building, for alternate program. Requirements for adoption of an "ALP Special Focus Program" depend on the program adopted, the needs of the school district, and those of the adopting school.

Materials: An extensive variety of commercial, teacher-made, and project-developed materials is used including:

- *Trouble Shooter Series* – for basic skills in English.
- *Basic Math I or II* – for basic skills in math.
- *The Course Catalog* – describes courses, tutorials, and projects offered, used by students in making course selections.
- *The ALP Curriculum Guide* – describes alternative methods for curriculum development and student instruction, enabling teachers to design the alternative curriculum for courses offered in the ALP program.
- *The Staff Handbook* – a comprehensive overview of the ALP program, with detailed descriptions of all aspects of the ALP alternative education model, including: curriculum; the credit system and graduation requirements; teaching and counseling methods; discipline guidelines; bibilographies, resource articles and books available either in the school district community site placements or other educational in-situations.

An ALP Brochure and ALP Overview are available free of charge, as well as a complete list of materials used in the program. A 36 minute film and 28 minute slide-tape may be rented. No special equipment is needed.

Training: Staff training is an important component covering three weeks of training prior to the school year, with meetings and curriculum workshops scheduled throughout the year for project staff and college interns. Services available include: awareness sessions; consultation for program design, development, and funding; inservice training for personnel carrying out adaptions of the ALP model; technical assistance to implement adoptions of ALP; resources and materials necessary for successful program adoption, consulation for evaluation and development of evaluative methods.

COSTS

Of implementation: These vary according to (1) the nature of project adoption or adaptation; and (2) the physical, material, human, and financial resources already available in the adopter school district. Cost for installing the original ALP program in Providence was $1,653 per student.

Of maintenance; Cost in Providence, is $956 per student, which compares favorably with the average per student cost of traditional secondary education in the area.

CONTACT PERSONS

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Special Interest
– Teaching Styles
Grades 1-12

CENTER ON TEACHING
The Spectrum of Teaching Styles: From Command to Discovery

Highland Park, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONAL

Designed to help teachers inprove their own teaching and their students' learning, the Center on Teaching (COT) was established to implement the *Spectrum of Teaching Styles*, research its impact on teaching and learning behavior, and develop training programs for teachers and administrators in its alternative teaching styles. The Spectrum is a theoretical structure comprising seven alternative teaching styles ranging from Command to Discovery. It is an integrated theory which: shows the place of each style on the Spectum; identifies the assets and liabilities of each; highlights the relationship among the styles rather than their disparity; and delineates the specific roles of both teacher and learner in each style. This *specificity* clarifies *expected behavior* for both teacher and learner in a given episode. It does *not* promote a single teaching style since human learning behavior is multiple, warranting several teaching styles. Operating on the theory that the same learner is capable of different learning styles at different times, it trains teachers to identify and employ alternative teaching styles. By examining the anatomy of each Spectrum style as to its operation, assets and liabilities, implications, curricular decisions, structure of subject matter, teacher/student communication, discipline and deviant behavior, systems of reward and reprimand, verbal behavior, and developmental channels, teachers develop an awareness of their own teaching behavior, and learn how the roles and responsibilities of both teacher and learner change when decision making is shifted to the student. By thus providing mobility along the Spectrum, teachers and administrators are encouraged to eliminate their own general idiosyncrasies, personal opinions and random teaching behavior in favor of developing objective methods and teaching assessments which will enhance their impact on the cognitive, affective, social, and physical development of their students.

Since its inception, the Center has done experimental work with teachers, administators and students in a variety of subject areas and on all educational levels, focusing on the refinement of the *deliberative* behaviors of the teachers in each style along the Spectrum, thus improving the relationship between the given teaching style, the stated objectives and learning behaviors.

The Spectrum provides teachers and administrators with the followirg:

1. A theory of alternative teaching styles – ranging from teacher-directed learning (teacher decisions) to student directed learning (student decisions.)

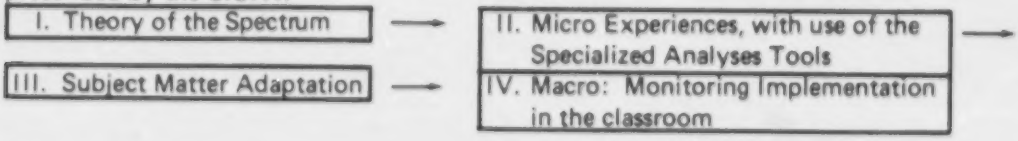
2. The anatomy of each style which serves as a guide for specific behaviors.
3. The specific learning goals accomplished by each style.
4. A basis for a *rational* training program.
5. *Objective* analysis tools used during training and during implementation.
6. *Objective* procedures and analysis to be used by teachers and administrators to determine whether or not the teacher's intent and action are congruent.
7. A training program which analyzes the implications of each style to: classroom organization and management, the impact of verbal behavior on a social interaction, material design, etc.

Together all these offer an opportunity for sharper insights into what happens to students during their learning experiences.

The experimental work was conducted with administrators and teachers in South Brunswick's Constable Elementary School and Crossroads Middle School, and in Red Bank Regional High School over a 3-year period, 1973-76, funded by ESEA Title III. The program achieved validation in 1976.

ESSENTIAL ELEMENTS

The program's replication of one or more styles is defined by participating in the four steps as prescribed by the C.O.T.:


I. Theory of the Spectrum
II. Micro Experiences, with use of the Specialized Analyses Tools
III. Subject Matter Adaptation
IV. Macro: Monitoring Implementation in the classroom

GOALS AND RESULTS

Goal #1

Spectrum teachers will give significantly more individual attention to students during class time than Control teachers.

Goal #2

Spectrum teachers will spend significantly less time than Control teachers dominating classroom academic discussions.

Goal #3

More efficient use of class time will be made in Spectrum classes than non-Spectrum classes. Specifically, Spectrum students will pay closer attention in class; class pace will be faster; less time will be wasted getting started; students will spend more time on school work; students will give their teachers fewer discipline problems; and students will waste less time than non-Spectrum students.

The evaluation techniques used three sources of data: student and teacher questionaires administered both years of the study and systematic analysis of videotapes of actual

classroom sessions by Spectrum and Control teachers. Care was taken to get control teachers and students comparable to the trainees.

Goal one was decisively confirmed. In two studies Spectrum pupils reported they received more individual attention from teachers than did non-Spectrum pupils, and Spectrum teachers reported giving more individual attention than Control teachers. Furthermore, analysis of videotaped classroom episodes showed that Spectrum teachers spent over twice as much time as Control teachers in interactions with individual students. Conclusion: Spectrum teachers appear to give more individual attention.

Goal two was clearly supported. Analysis of classroom videotapes showed that Spectrum teachers spent less than half as much time as Control teachers in such activities as disseminating information, lecturing, and reading aloud. Conclusion: Spectrum teachers appear to display less domination of academic discussions.

Goal three was also achieved. In both 1975 and 1976, Spectrum students reported moving at a faster pace and paying closer attention than non-Spectrum students. Other trends in the *student* questionaire data for both years favored the Spectrum; fewer discipline problems, more time spent in hard work, and less wasted class time. These trends were also seen in both years in the comparisons of the reports of Spectrum and Control *teachers.* Analysis of classroom videotapes indicated that slightly less time was wasted in Spectrum classes. Conclusion: More efficeint use is apparently made of class time in Spectrum classes.

REPLICATION

Materials: The following materials are available:

- **Film "Teaching: From Command to Discovery".** Describes the theory and implementation of the Spectrum of Teaching Styles. Available only with a presentation by the project staff.
- **Training and workshop materials.** Available only to schools participating in the training.
- **Program Description Brochure** – free of charge.

Training: Visitations may be arranged in advance. Inservice training is essential. The C.O.T. offers 3 *options* for training:

Option 1 – Training in *any one* style
Time: 3 day for training, 1-2 months monitored implementation.

Option 2 – Training in *two* or more styles
Time: 5 days for training, 2-3 months monitored implementation.

Option 3 – Training in the *entire* Spectrum
Time: 10 days for training, 4-6 months monitored implementation.

An administrator must be trained, to continue the program; and participants must agree to follow through with the four essential steps of the program (listed above). Training takes place in schools of the adopting district during the school year or in the summer.

COSTS

Of implementation: Minimal costs relate to staff training, rental for video-tape equipment, materials (at cost), and film (nominal rental fee). Services of C.O.T. staff are free of charge.

Of maintenance: None, since follow-up costs are absorbed by the Center on Teaching.

CONTACT PERSONS

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Special Interest
– Arts and Sciences
Grades 10-12

COMMUNICATION ARTS AND SCIENCE TRAINING (CAST)

Union, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

CAST is a **comprehensive** inter-disciplinary program designed to give High School students the opportunity to study and develop skills in the field of television communication.

CAST offers both formal classroom instruction in language arts and practical experiences in television studio production. This is accomplished in a two period time frame, one period devoted to Communication Arts and one to Communication Sciences.

The Communication Sciences, or skills portion of CAST, provides the student with extensive television studio experience. This includes "hands on" activities covering overall television productions. Skills areas include utilization and operation of the television camera, production switcher, audio components, video tape recording, lighting, editing both audio and video, set design and construction, and other related television production operations. CAST students are required to produce and direct a minimum of six productions during the first year. These are developed for educational, industrial and commercial purposes.

The Communication Arts portion is devoted to formal English instruction designed to enhance and reinforce Language Arts skills as used in the communications field. Areas of specialization include script writing techniques for producing news, documentary and interview programming. In addition, various works of poetry, short stories, novels and plays are used in the development of required television projects.

Students in their second year of CAST are exposed to television advertising, program ratings, multi media productions, communications history, FCC license preparation, and film in television. In addition to the extensive television production schedule, CAST students can participate in an externship developed in cooperation with representatives of the CAST Industrial-Educational Advisory Committee. Indicative of its inter-disciplinary characteristics, CAST students work closely with students and teachers in the Music, Art, Vocational, Business Education, Foreign Language, Social Studies and English departments in the mutual development of telecommunications projects, and also with local county and state agencies.

The overall program, comprising 30 students at a time, enables students to work with others of diverse educational, racial and special backgrounds, a heterogeneous group. Selection of students is made jointly by the Guidance Department and the CAST staff.

CAST was developed over a 3-year period, 1974-77, funded by ESEA Title III. It arose from the district's desire to enhance student motivation, improve drop-out and attendance rates, and expand vocational choices for its students; and from the realization that its students were not being prepared to enter the communication industry which employs more than 2 million people, most of whom work in the adjacent New York metropolitan area. Furthermore, no comparable program was offered anywhere in the United States. The program was validated in October 1977, and is in process of applying to the Joint Dissemination Review Panel of the U.S. Office of Education for approval for national dissemination.

ESSENTIAL ELEMENTS

- Training in language arts skills necessary for television.
- Training in science skills and studio experiences associated with television production.
- Selection of students with assistance of guidance counselor and staff, based on student interest and motivation.
- Careful selection of CAST teachers and support staff.
- Use of proper facilities and equipment.
- Selection of student activities and projects according to individual interests and needs.
- Use of prescribed curriculum established by project staff.

GOALS AND RESULTS

Goals related to both cognitive and affective areas.

1. Cognitive:
   As a result of involvement in CAST, students will be employed in the Communications industry, or will be accepted in Post Secondary programs, in a proportion exceeding that of the general school population regardless of area of study.
2. Affective:
   CAST students will be significantly better than the general High School population in suspension rate, withdrawal rate, dropout rate and attendance rate.

The field test group comprised 134 students. Data provided by the End of Year and Career Survey indicated the CAST program shows positive results in its effectiveness in career placement and secondary school admissions, with 15-23% placed in communications careers versus 0% of general school population, and 67-74% in college, versus 61-63.7% of general school population. The result is most significant since most CAST students were not traditional college prep students.

In the affective area, CAST students had fewer withdrawals, dropouts and suspensions, and an improved attendance rate. This is significant in light of the student grouping and individual characteristics. CAST gave students a greater opportunity to succeed, fostering a degree of self-discipline and self censorship in the preparation of "broadcast quality materials."

"Spin-off findings were also noted:

1. A greater number of "underachievers" and general studies students are requesting admission to CAST in larger percentages than before.
2. Class groupings with students of varied backgrounds and ability levels can successfully work together.
3. Students are requesting additional media and television courses and would like the Board of Education to consider organizing a radio communications program. This increase has occurred since CAST.
4. Teachers are permitting students to submit required research work using "alternate" formats of which telecommunications holds the lead.

REPLICATION

Materials:

- **CAST I - Arts** – Curriculum Package $150 complete
  Thirteen major instructional units each including teacher's implementation guide, instructional materials, equipment, supplies, resources and facilities; detailed lession plans with tests and activities sheets; student handbook for CAST I materials.
- **CAST I - Arts** – Sound-Slide Instructional Media Package $30 per unit
  Thirteen major instructional units including slides, slide trays, script and cassette/tape recording.
- **CAST I - Sciences** – Curriculum Package $150 complete
  Nine major instructional units, (same detail as Arts Curriculum above).
- **CAST I - Sciences** – Sound-Slide Instructional Media Package $30 per unit
  Nine major instructional units including slides, slide trays, script and cassette tape recording.
- **CAST I Student Handbook** $2 each
  One provided for each student, includes technical and academic articles related to CAST I Arts and Sciences materials.
- **CAST I Television Production Guide** $10
- **CAST II Arts** – Curriculum Package $150
  Eleven major instructional units (same detail as Arts I curriculum above).
- **CAST II - Arts** – Sound-Slide Instructional Media Package $30 per unit
  Eleven major instructional units including slides, slide trays, script and cassette tape.
- **CAST II Sciences** – Curriculum Package $150 complete
  Eight major instructional units, (same detail as Arts curriculum above).
- **CAST II Science** – Sound-Slide Instructional Media Package $30 per unit
  Eight major instructional units to include slides, slide trays, script and cassette tape recordings.
- **CAST II Student Handbook** $2 each
  One provided for each student, includes technical and academic articles related to CAST II Arts and Sciences materials.

- **CAST II Television Production Guide** $10
- **Administrative Packet** $3 sample packet

To assist in the operation of the CAST project. These materials include:

Curriculum Evaluation Check List
Media Evaluation Check List
Student Profile Worksheet
Test Data Entry and Analysis Form
Staff Activities Planning Check List
Staff Performance Profile Check List
Talent Release Form
T.V. Production Team Organization Chart
Monthly Progress Report Check List

No special facilities are needed other than 2 large adjacent rooms, one for Sciences and one for Arts, with ample power sources for lighting and equipment, and with movable furniture. Arrangement and organization of space are important. Equipment used is the basic audio-visual instructional equipment available in most high schools, such as overhead projector, video tape recorder, T.V. monitor, slide and film projectors, microphone. Items to be purchased include studio TV camera with switches ($3,000), portable video camera ($1,000), audio mixer ($150) and a lighting system ($800).

Training: Training is essential to develop necessary skills and experience in new machine techniques and equipment uses. Two teachers are required, one for Arts and one for science who have successful records as classroom teachers, with experience or interest in television and electronics (for Science). Arts staff should be certified in Social Studies and/or English, Science staff should be certified in Industrial Arts, Vocational or Media. Support staff is provided by other interested teachers. Separate CAST administration is not needed. The CAST staff can be absorbed into any one of the following areas for administrative purposes: Art, English, Vocational-Technical Education or Social Studies. Minimum level of training for adopters consists of 1 week for teachers, 1/2 day for administrators and support staff, and time as needed for students, parents, general staff and board of education members.

COSTS

Of implementation: These relate to staff training and purchase of manuals and equipment not already available. No additional staff is required. Complete print materials are $150, with permission to duplicate consumables. Non-print materials can be loaned. Districts may develop their own instructional materials. To estimate needs of adopter district, CAST staff surveys adopter's equipment to determine its applicability to the CAST program. It also assists districts in implementing programs for Cable Television (educational and municipal channels), to tap their educational possibilities for the district's instructional program.

Of maintenance: Minimal, assuming availability of materials, equipment and staff. Maximum AV costs for the district's total instructional program are $600.

CONTACT PERSONS

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Special Interest
– Management (District)
Grades K-12

PROJECT CYCLE

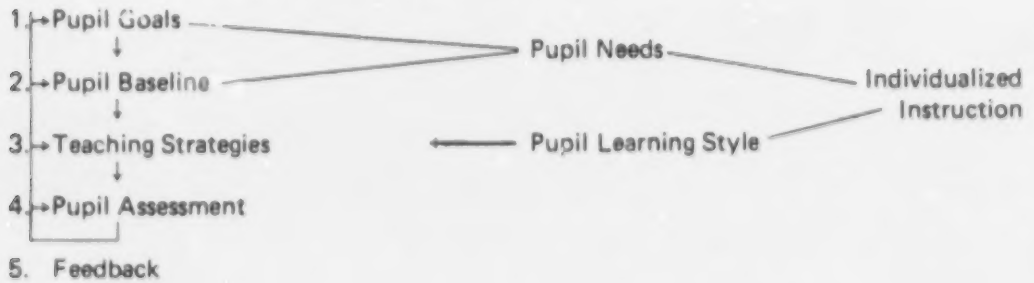
Newton, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONAL

Project Cycle is an integrated management system designed to achieve, through individualized instruction, a thorough and efficient education for a community's children (K-12). The cycle process consists of five components:

1. Goal setting
2. Baseline data collection
3. Strategy selection
4. Assessment
5. Feedback

These five steps are implemented at four levels: the system, school, program and pupil levels. The basic assumption of the project is that use of the system's approach to educational decision-making at every level of the school system will facilitate the implementation of individualized instruction, or, meeting the needs of the child. The way that the child learns best is translated into the use of a proper teaching strategy. The relationship of these various components is shown in the following diagram.



The project is based on the availability of a computer. The following management functions are performed on it with local staff who are operators, not programmers.

1. Pupil attendance, which includes the printing of monthly registers and year-end reports

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2. Monthly program budget status reports
3. Student report cards grades 3-12
4. High School scheduling with weekly updates, honor roll lists, etc.
5. District payroll

This is in addition to the rapid processing of data needed for program development.

1. **Program Assessment**—This process is called CAM-Comprehensive Assessment Monitor
2. **Student Assessment**—This process is called SAM-Student Achievement Mastery
3. **Student Diagnosis**—This process uses the baseline data system

All the procedures necessary for the successful implementation of the project have been developed. The project is organized so that components of the model are completed sequentially. The classroom organization varies, based on the decision of the teachers on the program team. In any particular curricular area, there is no more instructional time than usual. A teacher aide is assigned to each elementary team, which is usually made up of four to six teachers from two or three grade levels.

Individual student assessment is a primary component of the program. Teacher program teams construct their own criterion-referenced tests, based upon the assessment objectives. Administered prior to instruction, the results indicate to the teacher the strengths and weaknesses of a particularly student. Student progress is assessed by criterion-referenced tests administered after instruction.

Funded by ESEA Title III, the program was developed over a three year period, 1972-75, in 2 schools in the District and achieved validation in 1975. It can be combined with any project, with the expectation that any curriculum program using the process will achieve greater progress for children.

ESSENTIAL ELEMENTS

Specifically the program integrates:

1. Community developed school and system goals
2. Teacher developed program and student objectives
3. A baseline data system supported by a mini-computer consisting of:
   a. System-wide program budgeting
   b. Individual pupil data (6 years)
4. Organizational change strategies consisting of:
   a. District-wide program development support
   b. Administrative team
   c. Program team planning and teaching
   d. Individualized instruction
5. Program and student assessment using teacher developed criteria reference procedures
6. Individualized pupil progress reporting

GOAL AND RESULTS

The goal was the implementation of a system or process to provide a thorough and efficient education for children at all levels of education.

The evaluation team was provided evidence that each step of the process had, in fact, been achieved. This evidence was in the form of completed product (i.e., a validated and board approved set of goals, a demonstration of the baseline data system, strategy selection method, and assessment procedures). In addition, the scores of the children enrolled in a math program using the Cycle process were shown to be significantly greater than children not enrolled in such a program. The pre-post experimental and control group model was used in this analysis. The impact of the model was evaluated at all three levels of system change: organization, process, and product, and was found successful. An assessment of teacher attitudes indicated favorable support of the Cycle Goal Setting System, The Management Information System, The Data Collection System, The Program Budget System and objectives.

REPLICATION

Materials: General information about the program is provided in a technical brief, project overview and a series of news stories. These are available without charge. Implementation manuals, a sound filmstrip and program manuals are available at cost. These include:

Sound Filmstrip – An introduction to the "Cycle" process.	$42.00
Training Manual – A complete description, with sample forms and computer printouts, of the installation process. for "Cycle."	$ 2.00
Technical Brief	No charge

Program development manuals include an explanation of the program and student assessment process, program terminal assessment objectives by grade/course and sample test items where appropriate. The manuals available, at present, are:

	COST
1-11 Mathematics	$2.00
1- 8 Physical Education	.50
1- 6 Art	.50
9-10 Science	.50
9-11 Woodshop	.50
9-11 Metalshop	.50
Sequence of Program Development Manual	1.00
Eight articles for newspaper release	.50

Training: Awareness sessions for potential adoptors are available on request. All administrators and teachers of an adopter district should be trained. Training is conducted by a

training team from the Newton School district and extends over two days, comprising general as well as group work sessions. In addition, 2-3 hours per week for team planning are necessary at the school reorganization stage and for continued program development. For district wide program development, two half-day sessions are required.

COSTS

Of implementation: These vary from district to district. If a district curriculum coordinator already exists, his duties can include program assessment and data flow responsibilities. (It is essential that the data necessary for program adjustment be given quickly to the program team members.) If this person does not exist then he becomes a start up cost. The same holds for teacher aides and school work room facilities. Many districts also have in-house or service bureau computer services. If data processing equipment is already owned and used by a district, the addition of a mini-computer to the operation can save a great deal of time and money. The computer used in the project costs approximately $27,000.00.

The basic cost of project implementation, assuming staff and equipment already exist in a district, is staff training and computer software purchase or rental, amounting to approximately $13,000.00 for each of the first two years in a district of 2,500 pupils. If no staff or equipment exist, the start-up costs are approximately $116,000.00 for each of the first two years.

Of maintenance: Continuing costs are approximately $5,000.00 per year for the district with staff and equipment and $65,000 per year for the district with no available staff and equipment, including the salaries of the director, secretary, two computer operators, equipment and material.

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Special Interest
– Management (Classroom)
Grades 4-12

DEMONSTRATION EVALUATION CENTER (CAM)

(School District No. 274)

Hopkins, Minnesota

OVERVIEW, DEVELOPMENT AND RATIONALE

The Demonstration Evaluation Center was designed to establish an instructional management information system to provide relevant data for use by teachers in order to improve student accomplishment. Three major components were developed by the Evaluation Center:

1. It designed techniques to assist teachers in developing objectives and related test materials.
2. It modified and totally revised a computer-based Comprehensive Achievement Monitoring system (CAM) used to monitor student performance on specified objectives. More than 300 classrooms (K-12) are using the system. Subject matter includes math, science, social studies, English, reading, and music.
3. It developed techniques to assist teaching teams in identifying instructional strengths and weaknesses, based on the evaluation data.

The system is used in classrooms that are group-paced, individualized, multigraded, etc., and is most successful when teachers are committed to objective-based instruction.

The Evaluation Center promotes the following activities for the program:

- Collects performance objectives for each course on the program together with test items to measure the attainment of each objective.
- Operates computer programs, using existing computer facilities, to process the data so that results may be returned to teachers and students within a day or two.
- Assists teachers in writing and choosing behavioral objectives and test items and in using evaluation results.
- Develops training materials to explain the program, its capabilities and its use in the classroom.
- Cooperates with selected schools outside the Hopkins district so that the program may be more wisely demonstrable.

In CAM (Comprehensive Achievement Monitoring), students take "mini" final exams every few weeks. Computers score the tests and print out a report to the *student* and to the *teacher,* noting not only the total score but also which objectives the student answered correctly and which incorrectly. The teacher than adjusts instruction based on the performance of the classes; and the individual student may study objectives missed. Each test is

a "mini" final (in that objectives from the *entire course* are being tested each time) so that student achievement growth throughout the year is visible. The data printed thus answers three types of questions.

1. How well are the students doing on objectives not yet studied? (Pretest information)
2. How well are the students doing on the objectives recently taught? (Posttest information)
3. How well are the students remembering what was taught some time ago? (Retention information)

Material components developed, essential for program use, comprise the following:

- **The Student Coupon** – a print-out report for the student recording mastery of objectives as well as the list of coded objectives.
- **Teacher Roster List** – the class record, listing students and their scores on all CAM tests.
- **Group Summary Report** – a summary of group performance on an objective or group of objectives; this enables teachers to analyze the effect of the curriculum on students.
- **Test Form Evaluation** – run only for new test forms.
- **Student Analysis Form** – a summary of the student's growth indicating total correct percentages and units completed; useful in parent conferences.
- **Item Analysis** – a summary of results by objective and unit, used effectively in curriculum revision.

Data from these materials enable teachers to revise course content and method for the class and for the individual.

The Evaluation Center was started in July 1970 to serve the district's teachers and administrators. Developed under ESEA Title III funding, it was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S.O.E. in May, 1965.

ESSENTIAL ELEMENTS

- An instructional management-information system.
- Use of a computer-based Comprehensive Achievement Monitoring System (CAM) to monitor student performance.
- Use of an Evaluation Center for assistance to teachers in developing objectives and tests and identifying student needs.
- Use of criterion referenced tests.
- Specific record keeping system with specially developed material components.

GOALS AND RESULTS

The primary goal was to improve student achievement, with three objectives:

1. Students in classes using the system will achieve significantly higher than tudents not in the program.
2. Students in classes using the system will find it a useful technique for monitoring their progress in the course.
3. Teachers using the system will find it a useful technique for managing classroom instruction.

An evaluation design using the *Sequential Test of Educational Progress* (STEP) was given to all pilot and control classes, grades 4-12, in math (elementary grades) and writing (secondary grades). Positive results were seen in three major areas of evaluation: (1) Student accomplishments in several subject areas showed significant improvement when contrasted with control groups. (2) Both student and teacher attitudes toward CAM-style instruction were significantly positive after use of the program. (3) External evaluation of CAM confirmed the program's significant effects.

REPLICATION

The project should be implemented on a limited scale, in one or two curriculum areas, at one educational level; it can later be expanded to include any curricula at any level.

Materials: A variety of materials has been developed for successful implementation. Materials essential for program use have been presented above (Student Coupon, Teacher Roster List, Group Summary Test Form Evaluation, Student Analysis and Item Analysis). In addition, curriculum objective-item books (including over 25,000 items) have been collected and written by teachers for use in their own classrooms in subject areas of math, geometry, algebra, science, biology, chemistry, physics, astronomy, physiology social studies, anthropology, geography, economics, political science, world studies, American History, world affairs, American political behavior, psychology, sociology, reading and music. These books, varying in page length, are available at copying cost of .10 per page.

Project developed materials include:

Slide tape explaining CAM printout	$40.00
Brochure: CAM FOR THE CLASSROOM	$ .10
"Hi, I'm CAM the Computer" (for elementary students)	$ .05
Parent Folder	$ .25
CAM COORDINATOR'S MANUAL (A technical operations guide)	$ 2.00
CAM— HOW TO USE IT: A TEACHER'S APPROACH TO CAM	$ 1.00

An adopting school district must have access to a computer with medium speed card-reading and line-printer capabilities.

Training: Inservice training is needed before implementation and possibly during the pilot school year. A part-time project coordinator and a part-time clerical person should be selected to manage the project. If possible, the coordinator and staff should visit the Hopkins camp site, or the adopting site should be visited by the Hopkins staff. Much training and help can be given by telephone and mail.

The Center sponsors workshops and training sessions; assists cooperating schools to set up and operate CAM centers; provides some training materials for students, teachers, parents, and secretary/clerical operators; and shares objectives and items in the Evaluation Center collection.

COSTS

Of implementation: Estimated installation costs: $2,000-$10,000 depending on available data-processing facilities.

Of maintenance: Estimated annual maintenance cost is $5 per pupil per year.

CONTACT PERSONS

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Special Interest
—Management (Classroom)
—Alternative School
Grades 7-12

DIVERSIFIED EDUCATIONAL EXPERIENCES PROGRAM (DEEP)

Wichita Public Schools
Wichita, Kansas

OVERVIEW, DEVELOPMENT AND RATIONALE

Project DEEP is an alternative and diversified classroom management program for secondary school students which makes school more meaningful and challenging, thereby producing positive results for all students. It provides an open classroom situation that stimulates student involvement through personal choice and independent work, with the teacher's role defined as advisor, consultant, resource person, and learning system manager.

DEEP provides a method of organizing and managing an academic classroom that differs from the usual classroom. Students in the DEEP classroom identify needs, formulate objectives, develop tasks based upon these objectives, present group and individual projects based upon fulfillment of objectives, receive teacher debriefing following presentation of the projects, and participate in their own evaluations. DEEP offers learners in academic subjects alternative ways to create, gather, develop, and display information. Extensive use is made of audio-visual resources. The classroom environment is casual, open, and task-oriented with a workshop atmosphere. Community resources are utilized.

The DEEP program operates in required math, language arts, and social studies classes, and normally a student is enrolled in only one DEEP class each day. While classes must meet graduation requirements, the specific curriculum and program goals are developed cooperatively by teachers and students.

In the first 17 days in the open classroom, students follow a specially developed itinerary which introduces them to the basic concepts of classroom operation. They are taught problem solving techniques; different games are used to clarify instruction; class goals are developed; the evaluation system is explained; in groups of three, they work on research projects such as producing a video tape, commercial, or news release; and then hold debriefing and evaluation sessions. Once the classroom management system (topic selection, research, preparation, debriefing, and evaluation) has been established, future activities are generated by teachers and students, with the teacher selecting general topics for study and students negotiating their project topics in terms of prescribed goals and objectives.

Funded through ESEA Title III, Project DEEP developed out of concern over the district's high number of dropouts and absentees, which motivated the search for a more meaningful educational alternative. During the first year, the program was conducted by its three developers in their U.S. History classes, with participant students selected at

random. In its second year, DEEP operated in required language arts, social studies, math classes, with students able to enroll in the program. Originally targeted for the apathetic learner, the "discipline problem", the poor attender, and potential dropout, the model has proved to work well with the gifted, the talented and the creative student, in fact, with most students. The DEEP classroom management model is adaptable to a variety of school structures: it can serve as an alternative within the traditional junior or high school, or in a separate alternative school; can be utilized in many academic subject areas, primarily language arts, social studies, and science; and is adaptable to regular, to modular, or to other types of flexible scheduling. In 1976 the program was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education.

ESSENTIAL ELEMENTS

- A structured alternative classroom management system involving topic selection, research, preparation, debriefing and evaluation.
- Student involvement and initiative in all phases, especially in selection of individual goals and topics.
- Teacher training for role as advisor, consultant and learning systems manager.
- Extensive use of audio-visual resources.
- Atmosphere fostering student reliance, independence and responsibility.

GOALS AND RESULTS

The overall goal was to reduce absenteeism and dropout rate by making school more meaningful, challenging and rewarding.

The project has ten affective and three cognitive objectives. Eight of the affective and one of the cognitive objectives were met by the senior high students; the project was not as successful with junior high students in terms of these objectives. For absenteeism and dropout-rate, DEEP students had a 30% lower incidence of absenteeism than did non-DEEP classes. Ninety-eight percent of students completing DEEP classes continued on to graduation. Eighty-five percent of students enrolled in DEEP classes completed at least six academically sound projects per DEEP class.

REPLICATION

Materials: Paperbacks, magazines, movies, audio-visual material and equipment, and art supplies are important to the program. Volumes I, II, III, and IV of *A Handbook of Structured Experiences for Human Relations Training,* by J. William Pfeiffer and John E. Jones, (University Associates Publishers, Inc., 1974) serve as teacher resources, suggesting activities for the decision-making process introduced at the beginning of the year. Materials containing classroom tested management systems for social studies, language arts, and math have been developed by the project as well as management charts and materials, and evaluation procedures.

Media presentation equipment is essential, either simple or complex, to be shared with other departments for maximum use. A large open classroom with movable seats for small grouping is recommended, to create the proper atmosphere.

Training: Training is essential and comprises 9 5-hour sessions. Held in an open classroom setting, training stresses the classroom management system and operation of each piece of media used in the program. Teachers work individually or in groups, each completing a project similar to a student project. Teachers trained as the core group, who will later train additional faculty members, must first demonstrate the ability to change their methods of instruction. Three-day training is conducted at either the project or adopter site, with the latter preferred. Follow-up consultation services are provided (one to two days).

COSTS

Of implementation: Installation costs are $30.37 per student, based on equipment and supplies for 180 students in six classes. The cost of teacher training is $900 per 25 teachers.

Of maintenance: Approximately $15 per year per student.

CONTACT PERSON

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Special Interest
– Alternative School
– Counseling
Grades 9-12

FOCUS

Roseville Area Schools
St. Paul, Minnesota

OVERVIEW, DEVELOPMENT AND RATIONALE

FOCUS provides an alternative education plan for students identified as disaffected, lacking motivation and confidence, and with low self-esteem. It is a 'school-within-a-school'' for 10th, 11th, and 12th grade students who, for a variety of reasons, are not functioning in school in a way that is beneficial to them and those around them. The goals of the FOCUS program are to reduce student disaffection with school and learning, to improve each student's background of basic skills, to build a classroom culture that demonstartes the caring principle, to improve each student's ability to relate effectively with peers and adults, and to give each student a reason to feel self-worth and hope for the future.

Students are selected for participation through a comprehensive diagnostic process involving tests of academic and social skills and attitudes, interviews, and staff conferences. Highest priority for placement is given those students functioning well below their potential achievement levels in social and/or academic skills.

A highly structured program, FOCUS offers courses in English, social studies, math, work experience and occupational relations. Individualized instruction is based on ability and need. Curriculum materials are modified to meet the student's level of skill-development and presented in relationship to survival beyond graduation. Students are actively involved in the selection, modification, and evaluation of these materials. FOCUS students take classes such as science, physical education, health, and electives in the regular school program. Instruction techniques combine individual teaching, large group instruction, independent study and small group class called FAMILY.

Family, the backbone of the program, is a group counseling experience which involves all FOCUS students. Each FAMILY consists of 8-10 students and one teacher who meet together for one hour daily throughout the year; it attempts to help the student develop feelings of caring, self-worth, and concern for others. It includes examination of one's own behavior in relation to the reactions of others, within an atmosphere of positive support from the group. By directing the influence of group peers, the skilled group leader is able to help a student deal with his or her problems.

The work experience program in FOCUS is used as the bridge between school and work. Its goal is to develop the basic skills and attitudes necessary for exployability. The work experience job placement is seen as a reinforcement for those students who are making progress in the FOCUS program.

Parental involvement is essential in the program, and positive parent-school-student relations are developed and maintained.

The FOCUS instructional team includes several full-time teachers, 1-2 full-time teacher aides, a part-time teacher, and one clerical aide. Each staff member is involved in at least one Family Group in addition to his/her regular instructional duties. The FOCUS staff is also on call 24 hours per day to assist students in crisis situations. In addition, community service agencies are used to meet students' educational, medical, legal, counseling and residential needs. The program is housed in a separate wing or building on the school grounds.

FOCUS was developed in the Roseville School District for students who were not succeeding in traditional curriculum programs. Throughout its development and implementation, parents were involved. It is currently operative in both high schools in the district, involving approximately 75 tenth, eleventh, and twelth grade students in each school.

FOCUS was validated and approved for national dissemination by the Joint Dissemination Review Panel of the Office of Education in May, 1974, and is funded by the National Diffusion Network as a Developer-Demonstration site.

ESSENTIAL ELEMENTS

- An alternative "school within a school" for disaffected, malfunctioning youth
- Specific selection of participating students
- Individualized small-unit instruction through the Family - the backbone of the program
- Use of varied teaching styles
- Intensive counseling
- Positive environment of care, responsibility, and reinforcement
- Structured curriculum stressing five areas - English, social studies, math, work experience, occupational relations
- Formal evaluation procedures
- Parental involvement.

GOALS AND RESULTS

The overall goals are to reduce student disaffection with school, improve his basic skills, build a classroom atmosphere of caring, improve his ability to relate with people and reinforce his feelings of self-worth.

Evaluation was based on 9 types of data: attendance records, scholastic records, standardized achievement tests, attitudinal surveys, discipline referrals, school suspensions, court referrals, Minnesota Multiphasic Inventory, and number of dropouts. A three-year evaluation (at the original site) demonstrated that FOCUS improved student attitudes toward school, improved self-concept, increased academic achievement, and decreased disciplinary referrals, school suspensions, and absenteeism. It has been unable to reduce the dropout rate, the only flaw in a positive record. Focus parents indicated substantial support, citing improved academic progress, parent-school and parent-student relationships.

REPLICATION

Many replication plans are possible, ranging from staff training in skills and strategies to enhance an existing program to a full-scale replication of the original site model. Size of program is determined by the number of target students identified by the adopter. Maximum advised for any one program is 75 students. Successful replications have been done in suburban, rural, and urban settings. The humanistic, caring emphasis of the program makes it effective regardless of ethnic or economic factors present.

Materials: Awareness brochures are available free of charge. Two project-developed manuals are available:

Focus Teacher Training Manual	$15.00
Focus Curriculum Manual	$10.00

Both manuals are provided free to schools attending the inservice training workshops. Though purchaseable, they are not "do it yourself" materials but were developed as a resource for the Focus Inservice Workshop.

Other curricular materials may need to be purchased, if not already available. A complete list of the Language Arts, Math, American History, Social Studies, and Career/Vocational Education materials used in FOCUS, their commerical suppliers, and costs can be obtained from the FOCUS staff.

No special equipment is needed. Facilities should include a separate wing or building encompassing 4 rooms for large group instruction, Family group, independent study, student lounge, and office space.

Training: FOCUS staff is generally selected from available employees. Four days of inservice training at the project site include special seminar sessions and internship in the FOCUS classrooms. A limited number of training workshops, at a site convenient to participants, is also offered; planned for two six-hour sessions, they include information on the philosophies, strategies, and skills used in the FOCUS program.

COSTS

Of implementation: These relate to inservice training of teachers, facilities, materials and personnel already available in the adopter school. Funds should be budgeted for physical modification of the FOCUS area. Further information is available.

Of maintenance: Minimal.

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Special Interest
—Social Studies
Grades 6-12

INSTITUTE FOR POLITICAL AND LEGAL EDUCATION "TURNING STUDENTS ON TO ACTIVE CITIZENSHIP"

E.I.C.-So., Sewell, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

The institute for Political and Legal Education (IPLE) has designed a year-long community-based social studies program to provide high school students with practical experiences in, and understanding of, politics, government and law. The need for this program was apparent when the voting franchise was extended to the eighteen year old.

Developed initially by the IPLE staff together with teachers and students in 14 New Jersey districts, the curriculum comprises an integrated mixture of innovative printed and audiovisual materials, roleplaying, simulation games, and practical experiences through internships and contact with community leaders.

The curriculum comprises three components based on four guides: *Voter Education, Government: the Decision Making Progress, Individual Rights,* and *Fair Trial/Free Press.* While there is a logical sequence from one component to another, each is independent and can be offered as a mini-course. Additionally, *Juvenile Justice* and *Law and the Family* are two new guides for the legal component. Activities include lobbying and parliamentary procedures, simulated elections, and issues analyses. A statewide Model Congress and four seminars a year sponsored by the Institute supplement the curriculum for all schools. Crucial to the program are the voluntary services of resource people who contribute their expertise, such as the League of Women Voters and the Bar Association.

The program stresses a two-fold approach: 1) the acquisition of knowledge, both information and skills; and 2) participation of the students, first in classroom and school activities and then in the actual community. This two-fold emphasis enables them to initiate and execute projects that affect the community in a positive manner. Field study and internships are vital aspects of the program. Hundreds of IPLE students in New Jersey and across the country not only acquire political and legal knowledge, and develop organizational, leadership and communication skills, but perhaps most importantly, successfully use their new abilities to register voters, to poll the electorate, to intern in local and county offices, and to involve themselves constructively in community-based activities.

Developed over a 3-year period, the Institute's first program on politics and government was validated in 1974 and approved for national dissemination by the Dissemination Review Panel of U.S. Office of Education. The program is currently in operation in 32 states in addition to the 27 high schools in New Jersey, serving a total of 5,500 students in 163 schools.

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The institute's second program focusing primarily on law, was initiated in 1974, and, in its third year expanded its scope to include middle school students, grades 6-8, under the subtitle "Law in Action". Validated in October 1977, this component has been submitted to the Joint Dissemination Review Panel for approval. IFLE is funded through ESEA, Title IV-C and the National Diffusion Network to provide dissemination services and materials for teachers and students who wish to participate in its programs.

ESSENTIAL ELEMENTS OF THE PROGRAM

The program's replication is defined by the use of the curriculum as specified below and by participation in at least three annual workshops and the three-day Model Congress. Adopting districts from states other than New Jersey are urged to work cooperatively to provide the workshops and Model Congress in their region.

The curriculum should be implemented in one or more of the following three units, each to comprise the number of components specified:

I Voter Education
(5 out of 7)

1. Voter Registration
2. Canvassing
3. Campaigning
4. Simulated Election
5. Issue analysis Center
6. Election information center
7. Campaign registration center

II State Government
(5 out of 8)

1. Local government study
2. County government study
3. State government study
4. Lobbying
5. Social research
6. Community project
7. Simulations
8. Model Congress

III Individual Rights: Freedom of Expression-Fair Trial vs. Free Press
(5 out of 6)

1. Foundations of law
2. Fair trial vs. free press
3. Free speech
4. Case studies
5. Moot courts
6. Simulations

These units may be adopted and/or adapted in any of the following combinations: I; I and II; I and III; II and III; I, II, and III.

Each unit includes class work, participation in seminars, volunteer activity in the community, and inclusion of resource persons from the community in classroom activities.

GOALS AND RESULTS

Goal #1

After the course of study, participating students will score significantly higher on the staff developed *Test of Political Knowledge* than before.

The Test of Political Knowledge was administered on a pre and post basis to a representative sample of students participating in the program and control group students following a traditional social studies program. Test scores showed that the students in the experimental group scored significantly higher on the post test than did those in the control group. Thus Goal No. 1 was achieved.

Goal #2

After the course of study, participating students will demonstrate a significant positive change in attitude toward active involvement in the political and governmental process as measured by the staff developed *Inclination to Participate Test*.

The test was administered on a pre and post basis to a representative sample of participating students and to control group students in a traditional social studies program. The test data showed that the experimental group scored significantly better on the post test than did those in the control group. Thus Goal No. 2 was achieved.

The IPLE course experiences have affected many students in their selection of college majors and careers.

REPLICATION

Materials: The IPLE staff has prepared extensive and detailed materials, available at cost.

Curriculum guides:

Voter Education	$ 8.00
Government: The Decision Making Process	$10.00
Fair Trial vs. Free Press	$ 2.75
Individual Rights (Revised)	$ 6.00
Juvenile Justice	$ 6.00
Law and the Family	$ 5.00
Approaches to Political/legal Education: An Implementation Guide for Teacher and Trainees	$10.00
Teacher's Manual for the Law in Action Series, grades 5-9	$ 1.50
Law-Focused Elementary/Middle School Materials: grades 5-9	$ 1.50

Booklets:

Voter Education Lesson Plans	$ 1.50
Voter Registration and Canvassing	$ 1.50
Hello, Are You Registered?	$ .50
High School Voter Registration	$ 1.50
Understanding Party Structure	$ .75
Political Education Assembly	$ .50
Electoral College	$ .50
Student Simulated Elections	$ .75

Election Information Center/Issue Analysis Center	$ .75
Political Campaign Techniques	$ .75
Subtle Bias of the Media	$ .75
Community Research Techniques - How and Why	$ 1.75
A Guide to Lobbying	$ 1.00
Lobbying Game: A Simulation	$ 1.00
What You Need to Know Abount County and State Government	$ .50
County Government Curriculum Guide	$ .75
Local Government Curriculum Guide	$ .75
Model Congress	$ 1.75
Individual Rights (students) revised	$ 1.50
Fair Trial vs. Free Press (students)	$ .75
Filmstrip-tapes:	
"First Step to Voting-Voter Registration"	$ 6.00
"How to Use a Voting Machine"	$ 6.00
"The New Age of Majority"	$ 6.00
"Turning Students on to Active Citizenship"	$ 6.00

Available free of charge are a technical brief and a project descriptive brochure entitled "Turning Students on to Active Citizenship".

Training: A five-day training program with follow-up consultations is provided. Adopters are requested to register one teacher and one student, preferably a junior, for the training; the student is necessary for assisting in implementation by working with his own peer group. An administrator should attend one day of the training. Training sessions are held twice each year in New Jersey; training will be conducted in other states for a minimum of 12 schools since that number is necessary to support the Model Congress and supplementary seminars. In New Jersey 3 supplementary workshops are conducted during the school year following implementation.

COSTS

Of implemenation: These relate to purchase of materials and release time for the training of teachers. The orientation, training and consultant services provided by the IPLE staff are free of charge, funded by ESEA Title IV-C and the National Diffusion network. No special facilities or equipment are needed.

Of maintenance: Minimal, after initial start-up costs for materials and training.

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Special Interest
– Humanities
Grades 7-9

JUNIOR HIGH SCHOOL PROGRAM TO INCREASE HUMANISTIC INSTRUCTION AND TO DECREASE DROPOUT PRONENESS AMONG UNDERACHIEVERS

(Junior High School Humanities)
Woodbridge, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

This program extends and adapts to the junior high school level the basic process that was developed in Project MOPPET (Media Oriented Program Promoting Exploration in Teaching), a humanities approach enabling the regular classroom teacher to integrate a comprehensive program of poetry, creative drama, music, art, dance and filmmaking with the regular elementary curriculum. Funded by a 3-year ESEA Title III grant, 1973-76, the project staff worked with junior high teachers (grades 7-9) to develop lessons that integrated the communications avenues of the arts with units of English, Social Studies, Science, Math, etc. These lessons were designed to foster creative arts experiences in which each student is able to express his or her individual impressions and ideas.

The district's educational needs which led to this program were (1) to provide humanistic experiences through which all students could express themselves through the various modes of the arts, and (2) to provide for experiences through which underachievers and the dropout prone could express themselves successfully. It was hypothesized that such successful experience is essential to enable underachievers to change their own self image and attitude, essential preconditions for school adjustment.

The project staff also created a physical setting for teaching the humanities, a carpeted room larger than the regular classroom, empty of furniture, with a large curved screen at one end to accommodate three simultaneous media projections. Within this framework the staff uses several types of audiovisual equipment, including slide, overhead, silent loop, and both silent and sound movie projectors, cassette recorders, and record players.

A similar setting may be created in a classroom, all-purpose room, library or any other large room, substituting for the large curved screen three individual screens, a very large white sheet of paper taped to the wall, or an uncluttered light colored wall surface.

As teachers become familiar with the project prototype lessons, the media techniques, and the process around which the lessons are organized, they are encouraged to design their own lessons integrating the new techniques with their own curriculum. Lessons may use commercial, teacher-made or student-made materials.

ESSENTIAL ELEMENTS OF THE PROGRAM

The program's replication in another site is defined by the regular use of MOPPET type lessons in four or more of the arts, by classroom teachers.

GOALS AND RESULTS

The objective of the program is to demonstrate that significant traits and attitudes of underachievers that have negative effect on school retention, can be overcome by the use of the MOPPET process; that after two years of MOPPET, traits and attitudes of alienation can be reduced or eliminated so that students' functioning can be normal.

First year: Baseline data and MOPPET lessons.
Two bottom track 7th grade classes were used, with eight bottom track classes from other junior highs used as controls. Pre- and posttests were given using the Demos-D Dropout Scale (DDS) and the Adolescent Alienation Index (AAI). Results of the pre-tests indicated that the experimental class was significantly below the control group in school alienation and dropout proneness. After 100 project lessons, the posttests revealed that the two groups were equalized.

Second year: MOPPET lessons
Nearly half of the two original control classes were mainstreamed in the eighth grade. The remainder formed an experimental class. The controls were a matched group from another junior high, matching based upon the School Interest Inventory (SII). After 67 project lessons posttest results indicated that: after two years in the program, alienation and drop-out proneness, as measured by the AAI and DDS, were significantly less for the experimental group than for their peers.

Third year: No MOPPET lessons, only tests.
All of the original experimental group was mainstreamed in the ninth grade. Using the previous year's posttest results as baseline data, the three previously used instruments, AAI, DDS, and SII, were again used as posttests with the experimental students. Two randomly selected regular classes were used as controls. The experimental children received *no special lessons* in the ninth grade. The results of posttests revealed that the mainstreamed experimental students were no more alienated or dropout prone than the sampling of regular students. Observations by a trained psychologist confirmed that the experimental children were functioning as well as regular students.

It can thus be concluded that two years of MOPPET program for junior high school students significantly reduce drop-out proneness and improve their attitude toward school.

Validated in October, 1976, the project is funded by ESEA Title IV-C as a demonstrator site.

REPLICATION

Materials: A brochure containing an overview of the program is available free of charge. A descriptive 16mm sound film may be borrowed. The project's materials are available at cost, and include:

MOPPET Teachers Manual, Grade 7 – 1976 edition (343 pages) $8.00
Contains 103 detailed prototype MOPPET lesson plans integrating the arts with language arts, math, science and social studies.

MOPPET Teachers Manual, Grade 8 – 1976 edition (200 pages) $5.00
Contains 63 detailed prototype MOPPET lesson plans, (as in Grade 7).

MOPPET: THEORY AND PRACTICE – 1976 edition (250 pages) $7.00
Describes theory, practice and teacher training. Contains conceptual model, lesson plan models, transcripts of four MOPPET lessons with descriptive commentary, and illustrates several formats for teacher training.

MOPPET: HOW TO DO IT – 1976 edition (80 pages) $2.50
Describes facilities, equipment, materials, in-service training and the role of administrators in adapting the MOPPET program. A replication manual.

SHH . . . LISTEN . . . –Junior High Program – 16mm film, 18 minutes sound, color, 1976 (Available on loan)
Shows MOPPET lessons with classes in the junior high schools of WOODBRIDGE TOWNSHIP; it includes interviews with pilot students who had formerly been placed in bottom track classes and had been helped by the program to adjust to regular classes.

MOPPET KITS (Available on loan)
A limited number of MOPPET kits for some of the lessons in each of the MOPPET teachers' manuals is available on loan. Kits include slides, tapes, transparencies and books, as identified in the lessons, and are intended to make it easier for teachers to sample the program. The ultimate objective of the program is to stimulate teachers to develop their own lessons and kits.

Commercial and teacher-made materials are used as well, such as records, tapes, books, art supplies, transparencies, film, etc.

For best results, a MOPPET room is recommended, twice the size of a regular classroom, free of furniture, with drapes for darkening, continuing special equipment such as film and slide projectors, cassette recorders, record players, etc., and with adequate space for students to move about.

Any room may be substituted which provides a good projection surface, proper room darkening and open space; conventional classrooms, all-purpose rooms, gymnasiums and auditoriums with movable chairs can be used.

Training: Visitors may see the program in action, examine its materials, and receive training and follow-up consultation in its replication. For adopting districts, preservice and inservice training are recommended for administrators and five turnkey teachers per school who will instruct other teachers in the program.

A series of 5 Intern Workshops is offered for interested teachers, administrators, and support personnel from the district. Here, educators are exposed to the same kinds of creative experiences in the arts as are MOPPET students. A series of three advanced workshops provides detailed information, implementation strategies, and consultation. MOPPET also provides a 2-4 week training session at the demonstrator site for educators of colleges and state or regional centers who wish to become turnkey trainers in their educational facility.

COSTS

Of implementation: These vary, depending upon materials, equipment, facilities and resources already available. For introducing the program into a district, estimated for 330 students, one renovated special facility, 3 classroom teachers and 3 arts teachers, costs are $7,240 distributed as follows: start up costs for remodeling, equipment, supplies and in-service instruction – $3,970; administration costs – $400; and operational costs for continuing in-service materials and equipment – $2,870. Detailed cost specifications are available.

Of maintenance: These also vary with the school district but are generally low since few of the materials are consumable.

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Special Interest
– Communications
Grades 9-12

MEDIA NOW

Southwest Iowa Learning Resource Center
Red Oak, Iowa

OVERVIEW, DEVELOPMENT AND RATIONALE

Media Now is a production-centered laboratory course of study in mass media knowledge and production techniques. Designed for secondary school students, grades 9-12, the program's selected modules now serve elementary and junior high schools; have been adopted for college programs; and are used successfully with gifted students. Built around the concepts of individualized instruction, performance objectives and "learning by doing", the course includes 50 "learning-activity packages" organized into 7 modules which include: Production (16); Media Hardware (10); Aesthetics (7); Evaluation (6); Message Interpretation (6); Genre (3); and Presentation (2). The modules may be used separately in an existing course structure, or the program can be structured as a semester or full-year course. The modules are complete components and may be expanded into individual courses or used to build other types of courses. The major course emphasis is on the mass persuaders of *Film, Radio* and *T.V.* and their power. When students see how a message is produced, how much work is involved, how creative one must be to make a good film, TV program, or radio spot -- they evaluate, interpret, analyze, and appreciate media forms, and learn how to communicate through them.

The seven modules comprise these activities:

- *Production* covers the conceiving, organizing, preparation and execution of the media message; it is inherent in all other modules.
- *Hardware* presents knowledge and "hands on" experience in operating the machinery used to project, record, and photograph various media messages.
- *Genre* classifies and identifies the genres used in radio, television, and film.
- *Evaluation* teaches students to judge the media and its messages.
- *Message Interpretation* involves understanding the special language used to communicate in the nonprint media, as well as the use of propaganda devices and their detection in media message.

– *Aesthetics* covers the artistic qualities of the media message, teaching students to "enjoy" works of media art.
– *Presentation* sensitizes students to the problems involved in transmitting a media message, by training them to plan, organize, and work with others in preparing messages for presentation.

Attention is also given to print media; individual teachers may include a study of newspapers, magazines, billboards and other graphic media.

The course contains 623 tasks organized into a performance hierarchy of four levels: course objectives, module objectives, LAP (local Adoption Plan) objectives, and student involvements (or activities). Student involvements are presented in SLAG (Student Learning Activity Guide) and SLAB (Student Learning Activity Book). The nucleus of the course is the Student Learning Activity Guide, the lab manual which allows students to work independently at their own rate. From time to time the class is brought together to discuss independent activities and progress with various modules. The packages contain pre- and posttests for student assessment. Each student must produce 10 non-print messages within the semester, each using 3 different non-print media such as photos, graphic art, movies, videotape or audiotape.

Media Now was developed under an ESEA Title III grant, by the Southwest Iowa Learning Resources Center, working with teachers and students in 25 Iowa high schools who contributed many of the exercises and projects included in the program. In addition to the course of study, a comprehensive evaluation model and new evaluation instruments were developed.

The program was validated and approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education. In 1973 it received an Educational Pacesetter Award from the President's National Advisory Council on Supplementary Centers and Services. More than half of Iowa's high schools now offer the course as an elective, and it has been adopted by high schools, colleges and universities throughout the nation.

ESSENTIAL ELEMENTS

– Individualized approach to instruction in mass media information and production techniques.
– A "learning by doing" system.
– Use of 50 learning activity packages organized into 7 modules – production, media hardware, aesthetics, evaluation, message interpretation, genre, presentation.
– Applicability to many teaching styles and units either an individual teaching style or team-teaching approach.
– Use of appropriate manuals, to be purchased.
– Use as a semester or full-year course, or as part of an existing course structure.

OBJECTIVES AND RESULTS

Goals were stated as follows:

Goal #1

Students will improve their knowledge of mass-media terminology and techniques more than will a group of comparison students not participating in the program.

Goal #2

Students will demonstrate increased production abilities more than will a group of comparison students.

Goal #3

Student will decrease their susceptibility to persuasion by the mass media more than will a group of comparison students.

Goal #4

Students will increase their positive attitudes toward media more than will a group of comparison students.

Research (1972-1974) employed project developed instruments in a pre/posttest control-group design; testing included 25 Iowa high schools encompassing inner-city, suburban, large rural, and small rural districts. Field testing and evaluation have included 140 Iowa School districts. Significant gains (as compared with control students) were scored by Media Now students for the four objectives listed above. Results show that Media Now provides students with the knowledge and skills required for informed media consumption and skilled media production. Research also indicates that an individualized approach to learning is an effective method for presenting course material in the study of mass media.

REPLICATION

Purchase of materials is essential for replication; inservice teaching is desirable. Program can be adopted by an individual teacher or a school system; special media equipment is essential.

Materials: Must be purchased as follows:

MEDIA NOW COURSE OF STUDY including 50 Learning Activity Packages and one each of the student and teacher manuals	$750.00
Additional copies of manuals:	
Student Learning Activity Guide	5.00
Student Learning Activity Book	5.00
Teacher Activity Book	8.00
Media Dictionary	9.00

Awareness materials are available free of charge.

Teachers are urged to set up a media library for which many pamphlets and booklets may be obtained free of charge. A broad collection of magazines, both for reading and for clipping, is essential in the Media Now laboratory, as are posters, brochures, printed advertisements and anything that reflects the media scheme.

Equipment needed is available in most schools. The lab should have tables and chairs instead of desks, and as much storage area as possible.

Equipment recommended: one 16mm sound projector, one 8mm projector, one filmstrip projector, one slide projector, one video tape recorder and camera, microphones and allied equipment, one reel-to-reel audio tape recorder, one portable cassette audio tape recorder, one record player, one super 8mm movie camera, one film splicer, one tape splicer for audio tapes, one super 8mm movie editor/viewer, a 35mm still camera, a simple camera, one light meter, flood lights, an overhead projector, and an audio mixer.

Training: Training involves at least two staff members from a school in a two day workshop, conducted at adopter sites, project site or at national training site, Northwestern University, Evanston, Illinois.

COSTS

Of implementation: $750 for Media Now package, plus costs of equipment not available in school district.

Of maintenance: Minimal: $5 for each Student Lab Manual and $3 per student for course replacement items. At least $75 per semester should be budgeted for film rental.

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Special Interest
—Alternative School
Grades - Senior High

MULTI–UNIT HIGH SCHOOL

North Hunterdon Regional High School District
Annandale, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

The Multi-Unit High School (MUHS) is an alternative high school organizational model comprising Learning Communities (LCs) and a multi-elective structure to create a more open, trusting and positive environment for both students and teachers. By combining an instructional strategy, organizational structure and staff development process, MUHS attempts to meet student-perceived, assessed, career and human development needs.

"Learning Communities" (or mini-schools) – offer the student an alternative personal approach to the basic areas of English, Social Studies, Math and Science. Complementing the Learning Communities is the multi-elective structure which attempts to address the human needs of students as well as their learning needs. Some students do well in a school where the curriculum is developed around the subjects, while others need a curriculum centered on the student. The program provides for both types of students by giving them a "supermarket" of resources where students with the help of teachers, counselors and parents can select those resources or combinations of resources that will maximize their learning.

Learning Communities form the basic administrative units within a departmentalized school of 300 multi-elective courses. Current high school staffing positions are preserved and interwoven into the Learning Community. The LC consists of a teacher team representing English, Social Studies, Math and Science; about 20-125 pupils; and a Guidance Counselor. Pupils spend at least 40% of the school day in LCs. There are LCs for many interests, such as General Education, Performing Arts, Math-Science, Social Science, Vocational Education, and Philosophical Foundations.

Freshmen are required to enter one of five Learning Communities: Humanities, Liberal Arts, Vocational-Business, Mathematics-Science, and General Education. Upperclassmen can enter an LC or participate only in the regular elective system. Within a given LC, the classrooms are next to each other, students and teachers work together and have sole

decision-making power over the community's block of time. They can ignore the regular time periods and arrange their schedule to fit the needs of the L.C. Decisions within the LC range from instructional decisions to budget transactions, and are reached by a consensus of the entire LC staff and, in some cases, with students participation. By keeping up to date on what is taught in each other's classes, the four teachers can arrange complementing lessons and, through cooperation and shared interests, learn about other fields in their LC and work other subject areas into their own class presentations, crossing the lines of academic discipline. Furthermore, the LC can develop and implement courses at will as long as they are congruent with the goals and objectives of the LC, the school, and the district.

To insure that pupils are learning, various assessment instruments are used periodically to measure both the cognitive and affective domains as well as the learning styles of each student in the community. Students usually work at their own pace.

The multi-grade or nongraded LC has found that 10th graders tend to work up to the level expected of Seniors and the pupils have come to ignore age differences. Furthermore, most behavior problems are handled by the LC where the teachers and the Guidance Counselor know the pupil and his family background.

Funded by an ESEA Title III grant over a 3-year period, 1972-75, the multi-unit high school concept was developed at North Hunterdon High School by teachers, curriculum leaders, and administrators who researched, studied, visited schools throughout the United States and various Individually Guided Education high school programs in Wisconsin and Ohio. The Institute for Development of Educational Activities (I.D.E.A.) of the Kettering Institute provided many of the operational processes necessary for the Learning Community concept. The North Hunterdon model evolved from the synthesized information. The program was validated in 1975 and is funded as a demonstration site.

ESSENTIAL ELEMENTS OF THE PROGRAM

The project's replication by a district consists of establishing, first, the proper atmosphere fostering care for others, positivism, and action; and second, the actual model with its components, which are:

1. Learning Centers
2. A multi-elective structure
3. An advisor advisee concept
4. A systematic curriculum/instructional process
5. A self-governance strategy

GOALS AND RESULTS

The overall goal was to make a large comprehensive high school more responsive to student, teacher, and community needs. It comprised two objectives:

Goal #1

The high school was to be reorganized into at least 10 learning communities incorporating the essential elements listed above.

The evaluation process examined both surface change at the school level, and self-perceived effectiveness at the LC level. Three instruments measured changes: the Internal Operations Instrument (IOI), the LC Self-Assessment Instrument and the Team Effectiveness scale. Data support the claim that the objective was attained, with over 50% of the school reorganized into Learning Communities.

Goal #2

Students were to make a significant gain in six areas of concern: Intellectual climate; Student dignity; Self-expression; Cohesiveness; Congeniality; Openness. Student intellectual achievement was to remain the same or to improve; and student failure, low-passing grades, and cutting rates were to decrease substantially.

For attitudinal changes, the Stern High School Characteristics Index was used; cognitive growth was measured by the Iowa Test of Educational Development Significant improvement was shown in both the cognitive and affective areas.

The project concluded that it had achieved its objective of reorganizing the high school into a learning community which could effectively create and manage curricular and instructional programs to meet the cognitive and affective needs of its students, thereby providing a viable alternative to traditional forms of secondary education.

REPLICATION

Materials: The staff has prepared 8 manuals detailing all phases from overview to training and evaluation ($36.00 per set):

- Project Manual
- Staff Development Manual
- Principal's Manual
- Assistant Principal's Manual
- Learning Community Leader's Manual
- Learning Community Staff Manual
- Guidance Counselor's Manual
- Department Chairman Manual

These eight manuals describe the techniques which may be used by directors, superintendents, principals, assistant principals, department chair persons, learning community leaders, guidance counselors, and staff. Charts, forms and written samples are included. The manuals serve as easy to understand resources.

Filmstrip-cassette (80 frames) $24.00

Outlines the project and describes the success which a school or district may experience. Technical Brief is available on request. No special equipment and facilities are needed.

Training: Inservice training is needed. On-site visitations may be arranged. Training is conducted by project staff for 20 percent of adopter staff in a three-day workshop, following which local leaders, aided by one project person, will train their own district personnel in a two-day workshop. Other in-service sessions may occur as needed. There is no charge for the services of the project staff. Consumer districts are responsible for costs incurred by their staffs for training and program installation.

COSTS

Of implementation: One-time start-up cost is approximately $20.19 per student. Management and operational costs are minimal since the project is a restructuring and reallocation of existing resources and staff responsibilities within a school's current budget. Additional costs relate to substitutes during service training, and stipends for LC leaders.

Of maintenance: Continuation cost is $7.64 per student per year.

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Special Interest
—Affective Education
—Behavior Modification
Grades 9-12

THE NEW MODEL ME
CURRICULUM FOR MEETING MODERN PROBLEMS

Lakewood, Ohio

OVERVIEW, DEVELOPMENT AND RATIONALE

The Curriculum for Meeting Modern Problems – known popularly as The New Model Me– is a program designed to help students understand themselves and to learn the attitudes and behaviors necessary to channel aggressive energy into positive actions. Developed cooperatively by the Lakewood Public Schools and the Educational Research Council of America, with ESEA Title III funds, the high school curriculum enables students to meet the problems of frustration and aggression by dealing with available alternative actions for solving personal problems, and the short- and long- range consequences of these alternatives.

The New Model Me centers on the causal approach to human behavior and aims to assist students and teachers to:

Look at the underlying causes of behavior
Understand the consequences of behavior
Select viable alternatives to nonconstructive behavior

This positive approach to the study of behavior and aggression is appropriate for all students. The curriculum is flexible and can be adapted to students' needs in a variety of school settings.

The basic texts are a student book and a teacher manual, both of which are designed to promote high-level interaction among students, and can be integrated easily into various subject areas. Units in the books deal with: Human Behavior, Controls, Real Self, Values, Response, Change. They may be used either as a semester course, can supplement existing courses, or be taught singly as two-week mini-courses.

Affective materials and activities constitute a substantial part of the program and are designed to prompt student awareness, centering around a discussion of feelings, attitudes and values. A series of awareness objectives is keyed to appropriate activities; they provide measurement indicators to note progress. Role-playing, journal-writing, conducting surveys, holding rap sessions are techniques used for helping students understand behavior - their own and others'. Art, music, TV, current events, and community members serve as resources for enhancing the curriculum.

The teacher manual bibliography suggests appropriate audio-visual materials and books. A reasonably nonjudgmental and flexible teacher, who maintains an attitude of acceptance of young peoples' ideas and a willingness to listen to their opinions, will be most effective with the curriculum. Teacher aides are helpful, but not critical for program success.

The New Model Me arose from educators' concern over increasing incidents of student misbehavior, vandalism and violence. Developed over a four year period, it was validated in 1973, approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education in May, 1974, and received an Educational Pacesetter Award in June, 1973 from the President's National Advisory Council on Supplementary Centers and Services. It now serves as a Developer-Demonstration Center, welcoming visitors and offering training and consulting services. Adoptions have been implemented in many areas of the country.

ESSENTIAL ELEMENTS

- A positive, preventive, causal approach to the study of human behavior and aggression, for secondary school students.
- Use of a flexible curriculum adaptable to different teaching styles and structures, with program treated as a semester course, or minicourses, or as supplements for existing courses.
- Six major units of study: Behavior, Controls, Real Self, Values, Response, Change.
- Use of awareness objectives keyed to appropriate activities.
- Use of specific, project-developed materials.
- Positive, supportive student-teacher interaction.

GOALS AND RESULTS

The overall goal is to help students acquire the knowledge, attitudes and behavior involved in the constructive control of aggressive behavior. Specific program objectives are listed in detail in each unit of the teacher's manual; the general curriculum objectives that apply to all the units are to:

Look at the underlying causes of behavior
Understand the consequences of behavior
Select viable alternatives to nonconstructive behavior

This involves helping students understand: the motivations behind, and causes of, behavior; the nature, sources and methods of dealing with frustrations; alternative solutions; guidelines for constructive behavior and their application in everyday living.

A variety of standardized and project-developed instruments and techniques, administered to 26 teachers and 600 students in grades 9-12, and 14 teachers and 500 students in grades 6-8, assessed the effectiveness of the program. Evaluation data from diversified socio-economic settings with control/experimental classrooms showed student growth at the .05 level in cognitive test (project developed) and in attitude measure (Personal Orientation Inventory). Teacher growth was shown through the Minnesota Teacher Attitude Inventory. Analysis of student/teacher feedback forms indicated strong support of curriculum.

REPLICATION

Materials: The following are essential:

- **THE NEW MODEL ME (Teacher Manual)** —183 page teacher manual that incorporates student text. $4.05
- **THE NEW MODEL ME (Student Text)** — 223 page student text $2.20
- **THE WORKSHOP IN CURRICULUM FOR MEETING MODERN PROBLEMS** — Teacher Training manual with supplementary items — Free to adopters

The following awareness items are available at no charge:

Project Monograph (20 pages)
Project Brochure w/price list
Project Overview (one page)
"American Education" reprint
"Summary of Project Activities" (one page)

The use of supplementary commercial and teacher-made materials is encouraged. Assuming adopter schools are already equipped with a variety of curricular supplements, no materials beyond the designated texts must be purchased. No special equipment or facilities are required other than film and filmstrip projectors usually available in secondary schools.

Training: The program can be implemented by one or several teachers and/or counselors in a school. A corps of personnel (teachers, counselors, administrative decision-makers) should be involved in initial awareness, two-day training workshops and follow-up activities. Training, conducted at either the project or adopter site, relates to nonjudgmental and nondirective teacher roles and includes an orientation to the causal approach, an overview of the curriculum, simulation of student exercises, samples of supplementary materials (audio-visual and printed) and discussions of program implementation. Materials are also available (in the workshop training manual) for schools wishing to conduct their own inservice training. One-day follow-up clinics are scheduled with adopters.

COSTS

Of implementation: Cost per pupil the first year is approximately $6, based on a student population of 300. This incudes the cost of the texts and inservice training.

Of maintenance: Minimal, if student texts are reused.

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Special Interest
—Migrant Education
—Vocational Education
Grades Pre-K to Adult

PROJECT NOMAD: NEEDS AND OBJECTIVES FOR MIGRANT ADVANCEMENT AND DEVELOPEMENT

Van Buren Intermediate School District
Lawrence, Michigan

OVERVIEW, DEVELOPMENT AND RATIONALE

Project NOMAD is an individualized instruction program for migrant students and families comprising three separate curricular components:

- Summer Educational Program: Students aged 2 1/2 -- 17 and young adults without a high school diploma.
- School Year Tutorial Program: Students K-12, of all abilities.
- Family Unit Educational Program: Total family.

The Summer Program provides 6-8 weeks of intensive educational and social experience planned to compensate for the migrant child's interrupted education. Students, grouped according to age, attend school 5 days a week, from 8 A.M. – 4 P.M. Curriculum includes nutrition and health care, cultural enrichment, career awareness, prevocational opportunities, and basics in reading, math, language arts, science, and social studies. Students 10 and older participate in three of the following prevocational programs on a half-day basis: secretarial/clerical, power mechanics, building trades, and agricultural science. Students are pretested; identified needs dictate behavioral objectives for each child. The curriculum includes a preschool program to prepare migrant children for entering school. Children are assessed individually and assigned developmental skills. Emphasis is on social, motor, and oral language devlopment. Classrooms are staffed with a teacher and an aide, one of whom is bilingual; preschool and kindergarten classes have additional aides. A mobile unit provides support services to migrant families at the camps. Activities based on needs of participants include basic education, recreational program, and human resource assistance. Parental involvement is encouraged through recruiters, evening open houses, and a Sunday Fiesta Celebration.

The *School Year Tutorial Program* operating in conjunction with the county's school districts, is designed to meet the needs of migrant students who remain in the school district for all, or part, of the school year. Students are pulled from their regular classrooms for 30-45 minutes daily and tutored individually or in small groups. Certified teachers provide daily intensive instruction in reading, math, and language usage to each student at his or her development level. Enrichment activities in culture and the arts and self-concept development are an integral part of the curriculum. The teacher's role also includes counseling students in the following areas: social behavior; adjusting to new school situations and teachers; attendance; completion of school; and advantages of education. Teachers also serve as a liaison between the home and school. A bilingual teacher aids local staff members; paraprofessional aides assist teachers with instruction. record keeping, and data collection; and a fully certified bilingual counselor works with students and bilingual associate counselors to promote better home/school relations.

The *Family Unit Educational Program* is held in the evening to encourage total family involvement. Its curriculum incluces instruction in basic skills, home economics, and training parents in preschool education. Instruction is held in two vans located at the migrant camps – to bring the school to the workers, on Monday through Friday. Each van, containing essential classroom furnishings, visits one camp per evening for approximately 3 1/2 – 4 hours; it also serves as a referral and information center, disseminating information about the health, education, and social services available in the community. While the Family Unit component is designed to improve the educational skills of young adults who have dropped out of school and to stimulate their interest in education, opportunities are also provided for involving the entire family in recreation, games, library activities and general counseling.

The project assesses student needs through standardized pre/post tests, individualizes instruction, and, through programmed materials, permits students to proceed at their own rate. Student records are maintained through the Migrant Record Student Transfer System, a nationwide communications network which stores and transmits records from a centralized computer data bank located in Little Rock, Arkansas. This system enables the district to maintain a continuous, updated educational/social/health history on each migrant student, thereby facilitating academic placement.

Project NOMAD was developed, and is funded, under ESEA Title I Migrant funds to meet the unique educational needs of the many migratory farm labor families who come to Van Buren County from the South. Approximately 1500 students are enrolled during the summer and about 100 during the regular school year; most are interstate migrants. Validated in 1973, the program was approved for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education.

ESSENTIAL ELEMENTS

- Individualized instruction for migrant children and families.
- Three major components addressing target audiences:
  - Summer Education Program, ages 2-1/2–17 and young adults desiring diplomas.
  - School Year Tutorial Program, K-12.
  - Family Unit Education Program – The total family.
- Stress on basic skills, vocational education, homemaking, counseling.
- Use of all community resources and services – health, recreation, library, culture, etc.
- Use of bilingual teachers and counselors.
- Use of the Migrant Record Student Transfer System for continuous update of individual student history.
- Parental involvement on both an advisory and operational level.

OBJECTIVES AND RESULTS

The overall objective is to provide educational programs for migrant students of all ages and abilities which compensate for their interrupted loss of education; and to improve their educational skills.

Two components of the project were evaluated: The School Year Tutorial Program and the eight week Summer Program. All migrant students are pre- and posttested individually using Gates-MacGinitie Reading Tests and Metropolitan Achievement Test, math section. The latest test data (1976-77) show that students gained an average of 1.6 months per month of instruction in reading and 1.8 months per month of instruction in math.

Other standardized instruments used are: the *Vineland Social Maturity Scale,* the *Peabody Picture Vocabulary Test* (with a supplementary test of receptive language in the student's native language), the *Michigan Oral Language Test,* the *Jastak Wide Range Achievement Test,* a Self-Appraisal Inventory and a School Attitude Test.

REPLICATION

Materials: A wide variety of commercially available materials and equipment already found in most classrooms is used as well as many teacher-made materials. The Summer Educational Program uses programmed reading and math materials from Behavioral Research Laboratories (BRL) which allow students to progress at their own speed. The School Year Tutorial Program uses criterion-referenced math and reading (System Approach to Reading Improvement), bilingual activity kits, a teacher's resource guide for migrant education, and a teacher's handbook on policies and procedures. The Family Unit mobile units contain a variety of Spanish and English language books, paperbacks, magazines, films, games, and sports equipment. They are also equipped with sewing machines, typewriters, cooking utensils, and portable kitchen appliances. The program also maintains a Migrant Student Transfer Record Terminal for transmittal of student records. Local schools provide space for migrant education staff members. Awareness materials describing the program are available upon request.

Training: Pre-service workshops and regular inservice training should be conducted for involved staff members, and should cover: the lifestyle and culture of migrants; methods and techniques for greater effectiveness in teaching migrant students; and parental involvement. Staff and local school clerks should also be trained in the use of the Migrant Student Record Transfer System. Teachers are needed who are genuinely concerned with educating a disadvantaged and culturally different group. Others needed are aides, recruiters representative of the group to be served, administrators, and curriculum and evaluation personnel. Training is conducted at the project or adopter sites. Visitors are welcome from mid June to the first week in August, and from September to May.

COSTS

Of implementation: Funding is through Title I Migrant ESEA Public Law 89-750. The per student cost for the *summer* component with approximately 1500 students was $210, including rent paid for the school facility and use of buses or transportation. For the *school year component*, serving 869 students, the per student cost was $247. Cost for staff depends on the number of eligible students.

Of maintenance: Minimal, once implementation is effected; staff needs vary with students to be served.

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Special Interests
– Teacher Training
– Pupil Services
Grades 7-12

POSITIVE ALTERNATIVES TO STUDENT SUSPENSIONS (PASS)

Pinellas County, St. Petersburg, Florida

OVERVIEW, DEVELOPMENT AND RATIONALE

Project PASS is an intervention program designed to prevent or minimize the non-productive social behaviors of secondary students, and to eliminate student suspensions. To achieve this, it uses a threefold approach:

1. Helps students develop a sense of personal worth and values which lead to productive social behaviors.
2. Provides nonproductive strategies for eliminating behavior problems before they lead to suspensions.
3. Humanizes the school by encouraging more personal interaction and an atmosphere of mutual respect and caring among administration, faculty and students.

Five areas of development are emphasized:

1. Staff development activities – include inservice training programs with follow-up consultations for each staff member, psychologist, teacher or paraprofessional, beginning with individual self exploration by each staff member.
2. Parent training activities – use similar techniques as in staff training, provided in six 2-hour sessions.
3. Time Out Room (TOR) – provides an area where students can discuss problems with a "facilitative listener" and explore productive alternatives, remaining until the problem is solved. This room also serves as an in-school suspension center for a limited period of time; however, while in the TOR, students receive assignments from regular classes so they do not fall behind in their subjects.
4. Conferences, counseling and group work – provide periodic meetings with students who are spending more than three class periods a day in the TOR to help them resolve their conflicts.
5. Intensive intervention – provides a school psychologist and social worker for the estimated 1% of the students having difficulty developing acceptable social attitudes; they work not only with the students but also with staff and parents.

Innovative courses have also been introduced: "Staff Development for a Humanistic School" and "Humanistic Activities in the Regular Classroom" help students and teachers get to know and appreciate each other. "A Student's School Survival Course" and "Home Survival Course" help students with home problems learn how to interact more effectively within their school and home.

Project PASS developed from a critical increase in student behavior problems resulting from forced desegregation and cross-bussing in an urban, densely-populated area. Faced with

a 200% rise in student suspensions over a 4-year period, from 1968-1972, Project PASS began operations as a 2-year pilot program in three secondary schools, under ESEA Title III funding. It is now implemented fully in 5 schools and partially in 7 or more schools in Pinellas County, after achieving validation in 1974 and approval for national dissemination by the Joint Dissemination Review Panel of the U.S. Office of Education.

ESSENTIAL ELEMENTS

- Staff development activities enabling teachers to deal effectively with student social behaviors.
- Parent training and counseling to reinforce school activities and atmosphere.
- Affective education and personal development programs for students and teachers with specially designed courses:
  For teachers: – Staff Development for a Humanistic School
  – Humanistic Activities in the Regular Classroom
  For students: – Student's School Survival Course
  – Home Survival Course
- Use of Time Out Rooms instead of student suspensions.
- Intensive intervention, with individual and group counseling for students with serious problems.

GOALS AND RESULTS

The overall goal was to decrease student suspensions. Objectives included:

1. To help students develop feelings of personal worth and values leading to productive social behaviors.
2. To provide non-punitive strategies for eliminating problems.
3. To humanize the school through an atmosphere of mutual respect and caring.

Evaluation results showed that student suspensions in project schools decreased about 30%, while in comparison schools they increased 10%. As a result of the success of the PASS program in pilot schools, it was expanded to all 12 high schools in the district. During the school years from 1972-73 to 1975-76, student suspensions in Pinellas County declined while suspensions in many other districts increased.

REPLICATION

Materials: The project staff has developed the following materials:

- Positive Alternatives to Student Suspensions: Process and Content $2.25

  Compulsory for replication, the manual outlines program operation step-by-step with suggested activities comprising:
- Staff Development for a Humanistic School
- The Whys and Hows for a Student Time-Out Room
- The Training of Time-Out Room Personnel
- A Student's School Survival Course
- A Students's Home Survival Course

– Basic Encounter for School Personnel
– Basic Encounter for Secondary School Students
– Humanistic Activities in the Regular Classroom.
– Transactional Analysis for Teachers

Leaders Handbook	$ .75
Teachers Workbook	No Charge

Available free of charge are:
PASS Brochure
An Overview of the Time-Out Room
Survival Course Outline
Humanistic Activities in the Regular Classroom
Outline of Basic Steps
Positive Alternatives to Student Suspensions: An Overview

A videotape describing the program is also available. *Reality Therapy* – W. Glasser, M.D. is used in the course.

The only special facility required is a room to accommodate at least 12 students, as the Time-Out Room, near the principal's office and provided with a telephone for the use of the TOR resource teacher, should the need for urgent communication arise, and with tables, chairs, study carrels, and resource materials.

Training: Successful implementation requires the cooperation of the entire school staff. Administrators, teachers, counselors, secretaries, custodians, paraprofessionals, and lunchroom personnel should attend scheduled workshops or seminars throughout the school year, to create a more humanized atmosphere.

Training for the individual in charge of the TOR is mandatory, before implementation and in additional workshops during the school year. Also, a psychologist and social worker should be employed for any needed intensive intervention. The psychologist, social worker, or counselor providing leadership needs an appropriate master's degree, and must be proficient in planning and implementing staff development programs as well as in providing direct services for students. The leader also provides training and consultation for the time-out room workers, who should have a minimum of a B.A. in one of the applied behavioral sciences with either related experience or recent training in establishing helping relationships with youth.

Two-day training for 30 persons is conducted bi-monthly. Demonstrations are scheduled two days per month, more on request. Training relates to:
– Staff Development for a Humanistic School
– The Whys and Hows of a Student Time-Out Room
– The training of TOR Personnel
– Humanistic Activities in the Regular Classroom.

Parent training and follow-up training are also available. Visitors are welcome by appointment.

COSTS

Of implementation: Since use of additional equipment and materials is minimal, per student start-up costs for a three-year program are about 40¢.

Of maintenance: Costs include salaries for a school psychologist and social worker for every five schools and a time-out room worker for each school. Per-student monthly operational costs will vary from $1.20 to $2 depending on whether a para professional is used in the time-out room.

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Special Interest
– Teacher Training
– Affective Education
Grades K-12

POSITIVE ATTITUDE TOWARD LEARNING (PATL)

Bethalto, Illinois

OVERVIEW, DEVELOPMENT AND RATIONALE

This performance based inservice training program for teachers is designed to produce attitudinal and cognitive changes in students "turned off" by school, with low self-concepts and low academic achievement. The underlying rationale is that a change in teacher behavior can improve students' self-concepts, thereby improving their attitudes towards learning. This change in teacher behavior can be affected by the use of multi-media, individualized, self-paced, performance-based teaching materials and strategies.

The program may be applied to all disciplines and all levels of instruction. For evaluating student growth in achievement, project strategies were tested in reading comprehension as measured by the comprehension section of the Gates MacGinitie Reading Test. Four kits were developed, each with the same general format: a list of performance based objectives is given; for each objective, many multi-media learning activities are provided, followed by an assessment by a member of the PATL staff, or micro-teaching on video or audio tape. With the completion of each kit, the teacher can better implement the skills addressed in the kit. Thus the actual curriculum is affected by the particular kit the teacher has selected to use at any specific time.

The *Individualized Instruction Kit* enables the teacher to evaluate quickly the appropriateness of reading materials for any student, to write instructional objectives, and to plan and implement an individualized learning program. The *Active Involvement Kit* shows the teacher how to use interaction patterns to facilitate classroom group discussion, small group problem-solving activities, reinforcement techniques, and simulations and games. *The Processes of Learning Kit* strengthens questioning skills which lead to productive thinking by students in the classroom rather than teacher-dispensed information. Finally, the *Improved Self Concept Kit* acquaints teachers with skills for enhancing self-concept through classroom management and communication. While classroom activities may vary slightly according to which kit is employed, there is no general disruption of curriculum with the installment of the program. Feedback to the teacher is an essential component of the program.

The installation of the program does not disrupt the regular flow of classroom activity. No aides are required since emphasis is placed on enrichment of existing teachers.

Developed under Title III funding, the program arose from an identified need to improve student attitudes toward school and the belief that teachers can help improve the way a student views himself in relation to school. Validated and approved by the Joint Dissemination Review Panel, the program is funded by the National Diffusion Network as a Developer/Demonstratcr project.

ESSENTIAL ELEMENTS

- Performance-based inservice teacher training, grades K-12
- Use of four kits – Self-Concept, Active Involvement, Individualized Instruction and Processes of Learning
- Identification of students with poor self-concepts and reduced rate of academic achievement
- Change in teacher behavior to effect change in student behavior and self-concept

GOALS AND RESULTS

The program had two major objectives:

Goal #1

Increasing student self confidence.

Goal #2

Increasing their growth rate in reading comprehension.

Evaluation focused upon determining whether or not a group of target students, scoring in the lowest quartile on self-concept scales and teacher ratings, would increase in their level of self-concept and reading comprehension as a result of program participation. (Teachers of target students had PATL training.) A project designed instrument, the Self Concept Inventory, assessed any gains in the affective area, while the Gates MacGinitie Reading Test determined increases in reading comprehension.

RESULTS

1. In the area of self-concept, baseline scores for all target students were obtained in the Fall of 1972 and then compared to data obtained in Spring, 1974, and Spring, 1975, for participants in the program. Comparisons were done separately for students in grades 2-4 and those in grades 5-9.

Target students exposed to the program, regardless of grade, made statistically significant gains in self-concept when compared to a baseline.

2. Gates MacGinitie gain scores were computed for target students for a six month period before and after program implementation. Results indicated that the rate of reading growth of target group students after their teachers had participated in project PATL significantly increased by an average of 50 percent.

Their improvement ranged from .71 years of growth per year to 1.4. Mean growth rates for students in the classrooms of non-participating teachers showed no such significant increase. The data thus indicate that the project achieved its two major objectives of increasing student self-confidence and reading comprehension growth rate.

REPLICATION

Materials: Except for films and commercially available publications, all materials necessary for classroom implementation of the project are provided in the kits, which are bound books. Films and other commercially produced materials are separate and, in some instances, optional. Each of the four self-paced performance-based teacher inservice training kits costs $5 and requires 20 hours over 8-15 weeks for completion. They are as follows:

1. *Self Concept Kit* – teaches specific skills for enhancing self concept through classroom management and communication.
2. *Active Involvement Kit* – teaches specific skills for large group, small group activities, and the use of simulations.
3. *Individualized Instruction Kit* – teaches specific skills in the development and sequencing of objectives as well as a format for developing learning activities.
4. *Processes of Learning Kit* – teaches specific skills to improve questioning, inductive and inquiry learning.

Available free of charge are the following:

Learning In The Small Group (book)
Brief Description
Brochure
Cost Implementation by Kit Area
Adoption Agreement
Kit Objectives
4 Day Training Workshop
Steps to Implementation

A project office housing the needed materials and the PATL staff member facilitates the smooth functioning of the program.

Training: Four days of training are necessary for persons selected as inservice specialists or Kit Advisors, each working with from seven to ten fellow teachers, subsequently, if they can be released from approximately 10% of their duties. At least one administrator should take part in the PATL Workshop Training, which takes place at either the developer site or adopter site.

COSTS

Of implementation: Start-up cost is $500 plus $10 for each teacher to be trained. Costs relate to the purchase of the non-consumable materials and to teacher training.

Of maintenance: These consist of salaries for Inservice Specialists. One full-time specialist is recommended for 100 teachers, 4 part-time additional specialists facilitate greater implementation effectiveness.

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Special Interest
– Alternative School
Grade 12

SENIOR ELECTIVE PROGRAM

Rumson-Fair Haven Regional High School
Rumson, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

The Senior Elective Program, designed by eighteen high school students and six high school faculty members in the summer of 1971, was initiated as part of an effort to update curriculum and as a complement to the construction of an open-space building to be used exclusively by seniors. The recommendations made to the Board of Education were all implemented and include the following:

1) Redesigning the school calendar from four marking periods to five, called "facets," each to conclude with one of the regular vacation periods.
2) Encouraging students to telescope the traditional academic courses into the first three years of high school, thus leaving the senior year primarily for elective courses.
3) Designing senior elective courses to reflect student and faculty interests, varying in length from one to five facets and graded either pass-fail or with letter grades according to student choice. Over 90 mini-elective courses were developed in addition to traditional courses.
4) Encouraging seniors to develop independent study projects under the guidance of a faculty member during the middle two or three facets.
5) Assigning seniors randomly to small discussion groups or "precepts" led by faculty members whose goals would be to provide support for independent study and contribute individual understanding through group interaction.
6) Allowing seniors the freedom of an open campus whereby they attend classes but need not be present during unscheduled time.

These curricular suggestions were refined during the following school year. Teachers worked on new courses of study. Administrators, department chairmen, guidance counselors and teachers were trained in alternative teaching styles. Preceptors were chosen and students were assigned randomly to them. Students were carefully counseled to make certain that course selections would support anticipated education and vocational pursuits, and a master schedule was drawn up for the new curriculum.

Concurrent with the curriculum revision an open-space building was erected consisting of five learning areas each of which may be subdivided by flexible, movable partitions. They contain stacking chairs, arm chairs, study booths, tables and open-offices. Learning areas are outfitted with blackboard space, projection screens and storage closets. The senior building with its new curriculum opened in September, 1972, and is now fully supported by the local Board of Education. The program serves approximately 320 students per year.

Each senior is required to: complete an independent study project; or become involved in a community activity; or seek work experience. No one teaching approach is required, but teachers are encouraged to develop methods conducive to teaching in open-spaced areas. Careful guidance is needed to ensure that students who plan to continue their education earn enough college entrance units during their four years of high school. Traditional subjects are available.

Validated in 1974, the program was approved for national dissemination by the Dissemination Review Panel of the United States Office of Education.

ESSENTIAL ELEMENTS OF THE PROGRAM

- Independent study programs
- Mini-courses
- Preceptorials
- Flexible scheduling to permit variable time-lengths for mini-courses and independent study

GOALS AND RESULTS

The overall goals were to counteract senior apathy, ease student transition to higher education, and offer a flexible, humanized senior program using the entire community as a learning center. The immediate objectives were that students participating in the alternative senior year program would achieve as well as students in a conventional program, in knowledge and use of social studies, and would experience more satisfaction with, and interest in, their educational experience.

Tests used were the Sequential Test of Educational Progress in Social Studies (STEP) and, for school attitudes and the teaching process, the School Sentiment Index, and Imagine That. All tests were administered two weeks before graduation to a random sample of sixty-three seniors in the alternative program at Rumson-Fair Haven and seventy-three seniors from a conventional high school program in another district.

Results of the STEP test indicated no significant differences in learning; the attitude tests also showed that Rumson-Fair Haven seniors felt significantly better about their school experiences. Statistical analysis showed that the Senior Elective Program achieved both of its goals.

REPLICATION

Materials: The following materials are available to interested educators free or at cost:

- Resource Compendium and Profile — $7.00 per copy
  Describes student and teacher reactions, outlines 76 minicourses developed by staff members, and contains a complete sample course of study. (73 pages)
- Courses of Study. Complete with bibliographic references and student-teacher parameters.
  - English (14 courses) — $2.50
  - Social Studies (14 courses) — 2.50
  - Busines (4 courses) — 1.00
  - Industrial Arts (4 courses) — 1.00
  - Sciences (9 courses) — 2.00
- Manual for Administrators — 1.25
  A "how to" booklet for persons interested in designing and implementing the Senior Elective Program.
- Filmstrip Cassette — $12.50 each
  Describes the development and implementation of the program and shows it in action.
- Final Project Report — 10 copies $2.50
  Describes the development and implementation of the program, its essential elements, goals, evaluation and plans for dissemination. (10 pages) — One complimentary copy with each order
- A Technical Brief is available free of charge.

No special facilities, materials, or equipment are required unless called for by the courses of study themselves. Though implemented in an open space environment, the program could be replicated in a traditional setting.

Training: Visitations are available by request. The staff offers training and follow-up consultation, funded by the National Diffusion Network Developer/Demonstrator project.

A 2-day training workshop is offered since teachers participating in the program have three kinds of responsibilities: supervising independent study projects; developing and teaching mini-courses; and conducting preceptorials. In addition, they may teach traditional courses. Inservice seminars are recommended to aid in the development of alternative teaching styles. Group interaction skills are necessary for staff members selected to be preceptors.

COSTS

Of implementation: These relate to staff training and curriculum development; they vary with the staff and the curriculum resources of potential adopters. Provision must be made for cooperative planning among students and staff, curriculum revision, and staff preparation. To some extent these costs could be a reallocation of current expenditures.

Of maintenance: No increase in regular school program expenditures.

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Special Interest
—Alternative School
Grades 9-12

PROJECT STRIDE: STUDENTS TALK-DIRECT-IDENTIFY-DEVELOP-EDUCATE

North Hunterdon Regional High School
Annandale, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

Project STRIDE is the alternative school of the North Hunterdon Regional School district. Originally designed to permit dropouts to re-enroll, the project also serves those students with special needs and problems who are referred by their guidance counselors. Students remain on the rolls of the district high schools, complete the usual requirements for high school graduation and receive regular high school diplomas. It thus offers an alternative educational experience which is a part of public education in the district, but does not necessarily occur within the school plant. Activities are housed in a former church which has been converted to a youth center.

Project STRIDE was conceived by district personnel in March 1975 to serve the needs of a large number of student dropouts, many of whom were disaffected or had family or job responsibilities that prevented them from attending school. Gradually, as dropouts were re-enrolled, Project STRIDE became available to students experiencing difficulty or dissatisfaction in the high school, who could transfer directly into the program. Many of the students are on probation, have been suspended from school or have financial burdens. At Project STRIDE, students are individually programmed to improve basic skills, receive enough credit to graduate, and are prepared to hold down a job. Working students may come in the evening. Teaching is done on a tutorial basis with few organized classes. At the present time STRIDE serves: High School dropouts, pregnant girls, young women with family responsibilities, disaffected students, non-graduating seniors. It differs from other alternative schools in that students come by appointment in an informal, tutorial setting and the schedule is adjusted to enable them to fulfill the credit requirements for graduation.

Developed under ESEA Title III-IVC funding, the project is now operated by the local school district. Validated in October, 1977, it is funded as a Developer-Demonstration site where interested educators can see the program in action and receive training in its replication. Application for approval by the Joint Dissemination Review Panel for national dissemination is currently in preparation.

ESSENTIAL ELEMENTS

- Acceptance by the local district of the alternative school program.
- A building physically separate from the parent high school.
- Assignment of at least two teachers, one to serve as teacher-director and a secretary/aide qualified and willing to work and teach in an alternative school.

- Enrollment of students both referred and dropouts.
- Development of learning programs with the cooperation of the high school department chairmen, with availability of parent school programs, activities and services.
- Pre-testing of students with standardized reading and math tests.
- Prescription and implementation of individual learning programs.
- The setting up of a record-keeping and reporting system.
- Issuance of the same diploma as that given in the parent high school.

GOALS AND RESULTS

1. Students in the STRIDE program will show an improved attitude toward school as indicated by a significant positive increase on the Sterns Characteristic Index and Peabody Test of High School Morale.
2. 60% of those students who have started instruction in the project will have received, or will be actively working towards, a high school diploma.
3. 70% of those students who have graduated will be enrolled in college or other institution for advanced training or will be employed in a full-time job.

Results were as follows:

- Pre and post-tests revealed significant improvement in school attitude on both the Peabody and Sterns tests.
- Cognitive gains were measured by pre and post-tests using the California Achievement Tests in Reading and Mathematics. The mean rose from 8.8 to 10.2 in reading and from 7.6 to 9.2 in mathematics.
- 72.3% of graduates are enrolled in college or holding full-time jobs. Another 10.6% are full-time housewives.
- 60.9% of the students who started instruction have received, or are actively working toward, a high school diploma and 4.4% returned to the parent high school.

REPLICATION

Consultation and training for replication are provided by the project staff at no cost to districts; adopters are responsible for costs for released time for their staff.

Materials: All training materials are provided by Project STRIDE and include a Process Manual, a Curriculum Manual and a Teachers Manual (prices of all to be determined). In addition, sample curriculum materials and handbooks developed specifically for the project are available. These include:

Student Handbook
General Information Handbook
Volunteer Handbook
Curriculum materials in Mathematics, English, Social Studies and Science
Various forms and record-keeping materials

Training: Pre-implementation training is essential, comprising 3 days for the directors and teachers involved in its adoption and a one day orientation session for others indirectly involved (administrators, parents, school board members, etc.).

COSTS

Of implementation: Estimated at $18,160, to cover training of teachers, purchase of materials, setting up a separate school facility, establishing a record-keeping system, etc.

Of maintenance: $43,350, which includes an estimated $3,600 for rental of a separate facility. This would vary according to facilities available in the district. Cost per student, based on 100 served – $615 including teacher salaries, facilities, materials, etc. This compares with $2,000 per pupil budgeted by the district for its schools. STRIDE students have access to all school facilities established for the district students.

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Special Interest
– History
Grades 10-12

UNITED STATES HISTORY: A DIFFERENTIATED APPROACH TO LEARNING

Pitman, New Jersey

OVERVIEW, DEVELOPMENT AND RATIONALE

U.S. History, A Differentiated Approach to Learning (DAL) is a two year social studies program for high school students. Designed to facilitate cognitive and affective growth in social studies, it emphasizes student responsibility and teacher accountability for achieving specified objectives through pre-planned activities. The heterogenously organized classes offer the student a variety of learning activites: 1) *Large group,* teacher-dominated classes are used to present concepts, audio-visuals or outside resource persons. 2) *Small group* situations create an atmosphere wherein students can interact in groups of ten to fifteen persons. 3) *Independent study* activities permit students to develop individual skills according to their ability and interest. The three activities are organized under a team-teaching approach.

The program is divided into sixteen learning units, each four to five weeks in duration. The units are:

Year I	Year II
Constitution	Economics
Practical Politics	New Deal and World War II
Manifest Destiny	Communism
American Indian	Cold War
Civil War	Black Studies
Reform in America	Sixties
Industrialism	Biographers
Progressivism and World Power	Then, Now, and Someday

Each student receives a student learning packet with each unit. The packet contains: unit rationale and goals, behavioral objectives, large and small group situations, independent study guidelines, unit assignments, due dates, schedule and grading procedures. The student follows the packet guidelines and teacher planned activities to complete the unit work.

The program serves annually between 350 to 400 tenth, eleventh, and twelfth grade students at Pitman High School and has been in existence in Pitman Since 1972. Developed to meet Pitman's needs, it was funded by ESEA Title III for one year of evaluation studies which led to validation in 1975.

ESSENTIAL ELEMENTS OF THE PROGRAM

A replication must use the unit approach with student learning packets containing differentiated student activities. The activities must include large group, small group and independent study situations. Provisions must be made for a Social Studies resource center or school multi-media center to store the basic texts and supplementary commercials used by the students for needed information.

Another school may adopt the project as written, alter the project units to meet specific adopter needs or adopt the project's methodology to locally developed materials.

GOALS AND RESULTS

1. Students in the program will demonstrate significantly greater achievement on a sample of standardized instruments related to the content of the history program.

   Program students were randomly selected for a pre-test/posttest evaluation design using three standardized instruments: Cooperative History Test: Civil War and Reconstruction; Cooperative History Test: World War II and Aftermath; and SRA Test of Economic Understanding. Test results showed that all comparisons were statistically significant, and that the program enables students to increase general cognitive knowledge significantly in a curriculum that plans only one third of the classroom activities in a teacher dominated cognitive situation.

2. Students in the program will demonstrate a significantly greater ability to relate their personal feelings and make value judgements based on factual knowledge than will students in traditional programs.

   Three randomly selected groups of students were selected at the project school and a control group school. The instrument "Survey of Groups, Prejudice and Rationality" was administered to one sample at the beginning of the program, one sample at the end of the year of instruction, and the third sample at the end of two years of instruction. The instrument yields two scores; irrational anti and irrational pro. Project students exhibited significantly fewer irrational anti responses than control group students. Over the two year span of instruction, they had moved from a position of greater irrationally-founded answers to a position of less irrationally-founded answers against minority groups, thereby indicating they became more rational in their judgements than control group students.

REPLICATION

Materials: The following materials are available at cost

- U.S. History: Differentiated Approach to Student Learning Volume I (226 pages). Presents the eight units of U.S. History I, each containing the unit rationale and goals, behavioral objectives, grading system, independent study data, small group plans, large group data, special assignments and appendix. $7.25
- U.S. History: Differentiated Approach to Student Learning Volume II (230 pages). Presents the 8 units of U.S. History II in same format as Volume I. $7.25
- Teacher Resource Manual – Writing a Curriculum (66 pages) $3.50
  Details techniques for writing curriculum units for a district's needs.

A Final Project Report and a Technical Brief describing the program are available free of charge.

The following basic tests are used by the project, although texts available in a district may be substituted.

- Canfield and Wilder, *Making of Modern America,* Houghton Mifflin Company, Boston
- Johnson, Walter, *The United States Since 1865*, Ginn and Company, Boston
- McClenaghan, William, *Magruder's American Government*, Allyn and Bacon, Inc., Boston
- United States History Society, *History of Your America,* United States History Society Inc., Chicago
- Weisberger, Bernard, *The Impact of Our Past*, American Heritage Publishing Company, New York

A resource center must be provided to store basic texts and supplementary materials needed by the students.

Training: Teacher inservice training is essential. The program may be adopted in whole or in part. The project staff offers training sessions to districts interested in adopting or adapting the program. Consumer districts are responsible for staff training and project installations. Visitations should be pre-arranged.

COSTS

Of implementation: Start-up costs relate to staff training, teacher manuals, project materials and training sessions. These vary according to available materials and facilities, and to the extent of developmental activities, since some districts may wish to develop additional units. Implementation costs per student range from $23.11 to $80.75, decreasing with the increase in numbers of students.

Of maintenance: No increased cost; remains the same as a traditional program.

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